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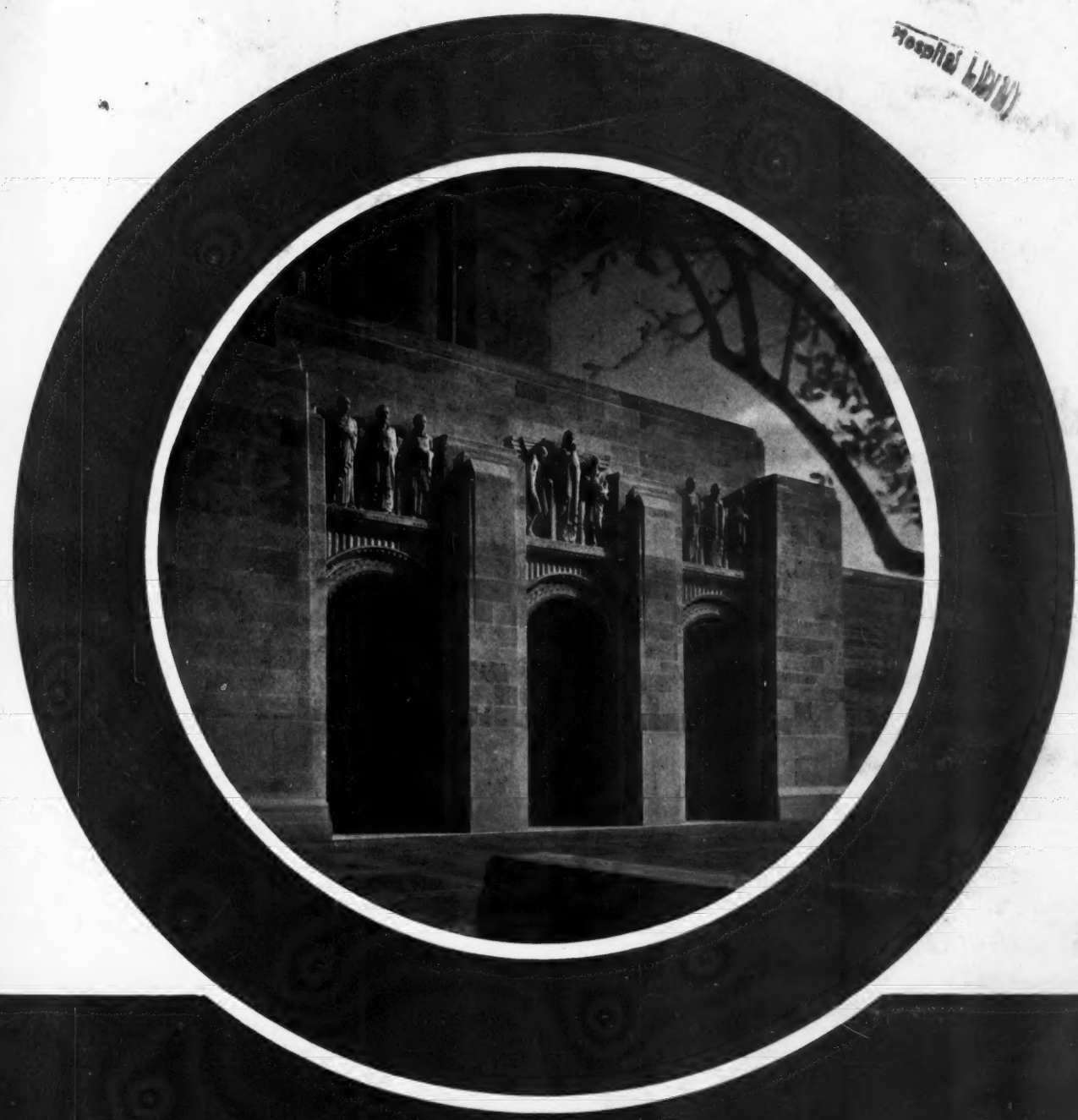
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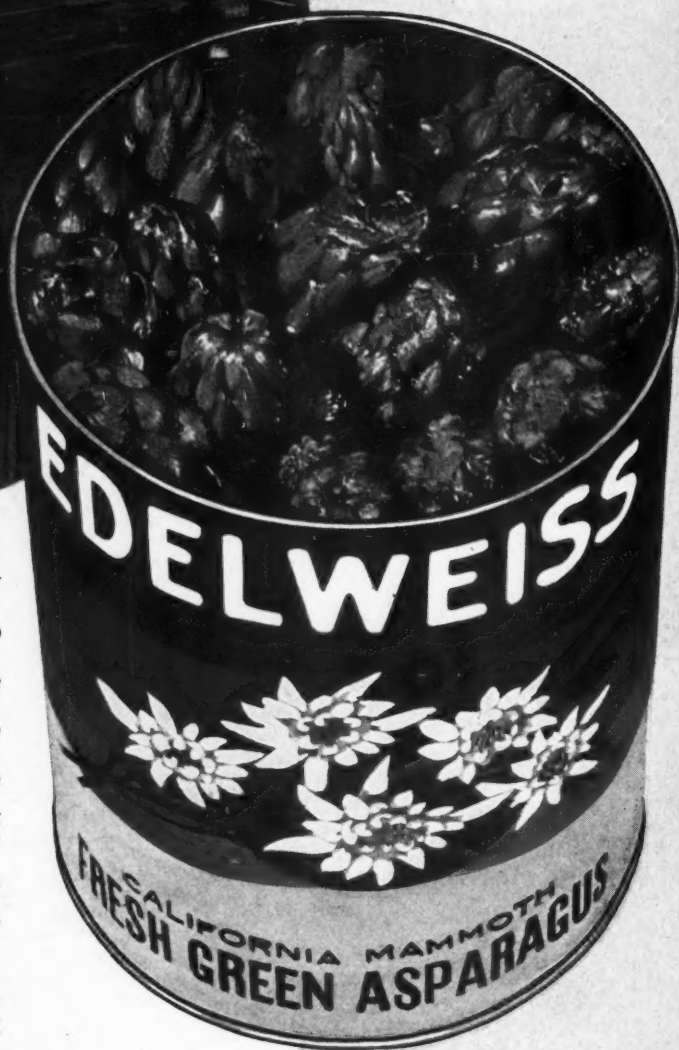
MARCH 1936

NUMBER 3



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For March, 1936

Just in Passing—

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Sister Michaella	

IN the spring an intern's fancy may, as Dr. Basil MacLean says on page 74, turn to thoughts of loot. But the fancy of the superintendent turns to more constructive channels—to renovations, modernizations or even new wings and new buildings. So The MODERN HOSPITAL this month provides practical help. The portfolio of floor plans of small hospitals will be of interest to all superintendents since many of the problems presented even in these small units have their direct counterpart in the larger institutions. The salty comments by our architectural advisers will probably call down the wrath of readers upon the editor's head. But such reactions are always welcome.

AMONG the articles that the construction-minded superintendent will study carefully are ones on roof gardens, the planning of hospital kitchens, fire protection, a hospital garden, the planning of physical therapy departments and the planning of hospital communication systems. The air conditioning and modernization program at St. Vincent's Infirmary, Little Rock, Ark., will also be studied with interest. Sister Michaella believes that air conditioning pays, actually, in increased occupancy.

WE talk a great deal about the necessity of closing the poor nursing schools. But what is a poor nursing school? Can we measure the quality of nursing education in terms of the number of instructor-hours per student, or the number of

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volumes in the school library, or the amount of experience on the wards given to the student? Who knows how many hours of instruction should be given in pediatrics and who can measure the quality of that instruction? Do students learn exactly as much when they spend an hour with Miss Jones as they do from an hour's lecture by Doctor Brown. The whole system of purely mathematical standards for education is under suspicion.

But there is another method of measuring the quality of education that isn't so artificial and doesn't put education in a strait-jacket. It does not attempt to control the process of education but to evaluate the result, however it may be achieved. The time has come when this newer method should be applied to nursing schools, in the opinion of Dr. A. C. Bachmeyer, director, University of Chicago Clinics. His suggestions for a system of accrediting nursing schools will be presented in *The MODERN HOSPITAL* next month. No nurse educator or administrator of a hospital with a nursing school can afford to overlook Doctor Bachmeyer's article.

HOSPITALS in Cleveland spend from 15 to 37 cents per patient day for laundry service and their laundry cost per pound varies from \$0.008 to \$0.021, according to figures in the fourteenth edition of *The HOSPITAL YEARBOOK*. In any hospital, laundry service is an appreciable part of the hospital budget. Yet, how few hospitals have laundry superintendents who have a thorough knowledge of all the physical, chemical and mechanical aspects of their work. Until recently the same was true of commercial laundries. Realizing their shortcomings, however, the commercial laundries set up a research institute in Joliet, Ill., where trained research workers grapple with the problems of laundry operation with the aid of modern tools of science. The institute, through its published reports and its school for training laundry managers and executives has effected notable advances in laundry practice. Through special arrangements, *The MODERN HOSPITAL* is enabled to present a series of articles giving to hospitals the benefit of the institute's work. The series will start next month.

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FACTORS OF *safety* IN ANESTHESIA



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ANOTHER special service offered to our readers is announced this month on page 65. It resumes a fire inspection service provided over a decade ago. At that time many hospitals took advantage of the offer, resulting in savings to them on insurance premiums and greater safety to their patients. In this series next month Mr. Douthit will discuss what to do until the fire department comes.

FLASHES FROM THIS ISSUE:

"Brick or stone walls add little or nothing to the safety of a building if it has a wooden interior." *Page 66.*

"The kitchen does not represent a single operating department but is composed of a number of units variously combined into a general scheme." *Page 108.*

"No hospital should be granted financial support . . . or any new hospital built unless there is clearly a need for it and this need has been certified by appropriate local and state health and medical authorities." *Page 45.*

"The attitude of the staff toward physical therapy must be considered, for unless the physicians send cases to it the department will be a failure." *Page 78.*

"It is certainly better to have a few hospitals where they can most effectively serve the people than to put up hospitals hit and miss to gratify local vanity." *Page 44.*

"The physician or graduate nurse in an institution caring for mental disorders should look upon each year of service as one of graduate training." *Page 71.*

"The practice of not interviewing trade representatives will be reflected either in the cost of the hospital's purchases or in its lack of modern equipment." *Page 104.*

"There is always a time and place when discerning eyes may detect the possibilities of danger arising from accident." *Page 92.*

"To determine the area requirement of a hospital kitchen is not a simple matter." *Page 106.*

"All progressive state hospitals are reaching out into the community and carrying on an active educational and clinical program." *Page 72.*

"An extremely important function of psychiatric nursing is the accurate observations that nurses may make on the behavior of patients." *Page 74.*

THE MODERN HOSPITAL

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The Hospital Barometer

Occupancy in the voluntary hospitals rose rapidly in January as compared with December and the rise was greater this year than in either of the two preceding years. Tentative figures showed an increase of five points compared with increases of 3.5 points last year and 3.7 the year before. This rise brought the occupancy figure for the voluntary hospitals to the highest point it has achieved in the last three years.

In the government general hospitals occupancy also rose by five points, but this rise was less than the 6.2 point rise last year or the 5.7 point rise the year before. Furthermore the actual occupancy figures are down. The 85.6 percentage of occupancy for January of this year may be compared with 90.1 per cent a year ago, 87.8 per cent in January, 1934, and 85.9 per cent in January, 1933.

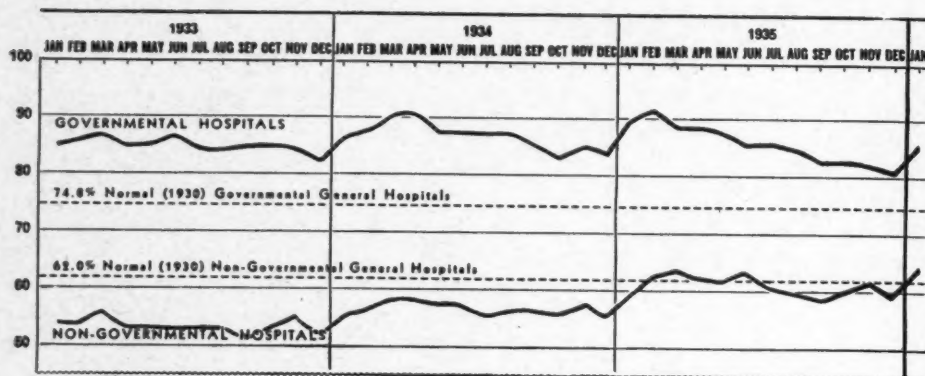
New hospital building projects took a distinct upturn according to the reports received between January 28 and February 24 inclusive. A total of 61 new projects were reported during the period. Cost figures, given for 58 of them, totaled \$10,853,000. There were two alterations costing \$45,000, three nurses' homes to cost \$1,120,000, thirteen new hospitals of which twelve reported costs of \$2,493,445 and 43 additions to hospitals of which 41 reported costs aggregating \$7,194,763. The nearly \$11,000,000 total for last month may be compared with \$6,013,000 for the comparable period of last year and \$4,595,500 in the same period two years ago.

The general wholesale price index of the *New York Journal of Commerce* rose from 79.9 to 81.8 between January 27 and February 24. Grain prices dropped slightly during this period, but the index for general food prices advanced

from 78.2 to 82.0. Textile prices remained unchanged while fuel and building materials advanced very slightly. The price index for drugs and fine chemicals of the *Oil, Paint and Drug Reporter* rose from 185.3 on January 27 to 186.4 on February 24.

Business activity during the first six weeks of 1936 was considerably below the level established in November and December of last year, according to the National Industrial Conference Board. The decline was particularly marked in the automobile industry, which resulted in lowered schedules in the iron and steel industry. Residential building activity continued to be well maintained through January. It declined less than seasonally from the December level but was more than 67 per cent greater than in January, 1935.

A fairly sharp upturn in most lines of business during March was predicted by the *New York Journal of Commerce*. Automobile production is expected to expand rapidly in preparation for the spring selling season. The already substantial volume of construction activity will be swelled by the anticipated rise in residential building. These developments will coincide also with normal spring expansion in a number of other lines.



OCCUPANCY FIGURES OF HOSPITALS IN VARIOUS STATES AND CITIES

Type and Place	Census Data on Reporting Hospitals ¹		1935												1936
	Hospitals	Beds ²	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Nongovernmental															
New York City ³	68	15,194	70.0	72.0	74.0	70.0	75.0	72.0	66.0	62.0	62.0	67.0	69.0	69.0*	69.0*
New Jersey.....	58	9,772	62.0	65.0	66.0	65.0	66.0	64.0	62.0	60.0	60.0	62.0	63.0	62.0	62.0*
Washington, D. C.....	9	1,790	72.0	71.8	70.5	69.8	68.7	70.6	68.2	62.0	63.9	68.3	68.3	63.0	70.8
N. and S. Carolina.....	102	5,950	60.6	63.1	64.9	62.3	64.6	66.8	65.7	66.3	65.7	64.4	63.3	59.1	64.1
New Orleans.....	7	1,146	47.7	49.5	50.1	46.8	50.9	58.3	57.1	58.2	55.1	53.3	55.8	50.8	58.3
San Francisco.....	16	3,081	65.5	68.2	67.4	69.5	66.4	67.4	62.4	63.9	63.9	66.7	70.2	65.2	71.9
St. Paul.....	7	848	41.5	53.6	55.9	52.3	48.8	51.7	46.4	49.1	48.5	46.6	50.7	49.0	56.7
Chicago.....	24	6,190	57.4	57.3	61.9	58.8	55.9	54.7	54.5	53.8	53.6	54.7	54.9	52.8	56.0
Cleveland.....	8	1,567	61.9	62.0	62.0	63.6	65.7	63.4	63.2	63.4	58.5	61.7	62.3	60.6	68.2
Total⁴.....	299	45,538	59.8	62.5	63.6	62.1	62.4	63.2	60.6	59.9	59.0	60.5	61.9	59.1*	64.1*
Governmental															
New York City.....	17	12,317	96.7	100.6	103.2	104.6	105.6	100.4	103.6	93.2	91.7	85.8	86.5	87.3	95.1
New Jersey.....	6	2,122	86.0	86.0	84.0	85.0	84.0	77.0	79.0	79.0	76.0	84.0	78.0	76.0	76.0*
Washington, D. C.....	2	1,596	86.6	95.5	76.3	72.7	69.4	67.4	68.4	69.5	62.9	60.4	60.4	62.9	71.4
N. and S. Carolina.....	13	1,256	65.4	65.7	68.5	65.8	68.6	68.1	68.7	72.3	68.0	66.9	65.4	63.8	71.4
New Orleans.....	2	2,227	144.9	145.4	130.4	130.8	132.8	138.8	149.0	143.1	140.9	138.5	137.4	127.8	130.0*
San Francisco.....	3	2,255	77.4	79.1	77.1	80.3	77.3	72.3	72.0	71.3	79.5	76.8	79.1	81.1	83.5
St. Paul.....	1	1,000	74.4	78.7	77.8	75.8	75.2	74.5	67.3	63.4	61.5	65.0	68.6	66.6	74.5
Chicago.....	2	3,880	89.0	83.4	93.9	84.2	86.0	84.5	83.5	80.5	80.4	81.7	80.2	79.5	83.3
Total⁴.....	46	26,653	90.1	91.8	88.9	88.7	87.4	85.4	86.4	84.0	82.6	82.4	81.9	80.6	85.6*

¹Insofar as possible hospitals for tuberculous and mental patients are excluded as well as hospital departments of jails and other institutions. The census data are for the most recent month. ²Including bassinets, in most instances. ³Includes only general hospitals. ⁴The occupancy totals are unweighted averages. These averages are used in the chart above. *Preliminary report.

Looking Forward

Profiteering

WHEN hospitals need additional personnel they sometimes announce the inauguration of a school for nurses, technicians or record clerks. In some instances the superintendent and the board of trustees know full well that there is no demand for this type of institutional worker. By accepting applicants for such training, therefore, they are in a measure profiteering on human credulity.

But this is not the worst sin committed in the name of education. To conduct a school for nurses without providing a high type of educational returns is dishonest. To offer courses for technicians in x-ray, clinical laboratory, record room or for nurses in anesthesia, without adhering to the curricular standards laid down by national associations is equally to be condemned. If the hospital does not consider that it receives a full recompense for its efforts in the educational stimulus which such activities arouse it should pay salaries to those who assist in the care of the sick rather than secure their services under false pretenses in the name of education.

The educational obligations of the hospital are very real. To entice young men and women within institutional doors on the promise of instruction and then to profit by their services unfairly is inconsistent with the best traditions of the hospital.

The Outlook Brightens

ADISTINGUISHED economist in 1930 made the unpopular prediction that as far as he could see the depression then starting would probably last for about seven years. He is one of the few economic prophets of those hectic days who can still carry his head high.

While specific prophecy is dangerous, it is wise from time to time to survey the ground covered and observe whatever is visible of the road ahead.

Just where do we stand at the moment? The

statistics on occupancy of voluntary hospitals, which is the most sensitive barometer we have on earned income, show that hospitals have recovered most of the loss suffered from 1930 to 1933. Much of this increased occupancy is, of course, found in the wards. But private patients also have increased in number and earned income as a whole has steadily advanced since September, 1933.

Unearned income, too, in the form of contributions and donations, is increasing appreciably. The most notable evidence is the almost fourfold increase of the amount pledged to New York hospitals through the campaigns of the United Hospital Fund. Similar results for other smaller campaigns have been reported from many communities.

Income from endowments, on the other hand, is still down and because of the present cheap money market many securities are being called or reissued at lower interest rates. Thus further decline of endowment income must be faced or investments shifted. While this is important to some hospitals, for the hospital field as a whole endowment income is a very small percentage of the total budget.

On the expenditure side, the upward movement of prices seems to have halted. The general price index of the *New York Journal of Commerce* stood at 79.9 on January 26, 1935, and at exactly the same point on February 8, 1936. While there were some ups and downs during these thirteen months, the long steady advance is apparently stopped for the present. Salaries, of course, are still low in most hospitals and readjustments must be made as soon as possible.

On the whole, the present situation of hospitals is distinctly favorable and a continuation of present trends will see renewed economic health.

But will present trends continue? That depends, of course, in considerable part on the general business situation. The seven years predicted by the economist are nearly up. Will improvements in business continue and at a sufficiently accelerating pace to bring true economic robustness?

Let us summarize without political bias some

of the factors now discernible. First the adverse factors.

1. There are three psychologic aspects which, whether based on correct or incorrect analysis, cause industrial timidity. They are the expectation of further reform legislation, the current and prospective demands of labor for a larger share in the national income and the uncertainty over the future value of the dollar.

2. The debts of the federal and local governments accumulated in their efforts to cushion the worst effects of the depression must sometime be paid, in good money or bad. While these debts would be relatively small were the national income back to the 1925-29 level, they bulk much larger today.

3. No end to unemployment relief is yet in sight. No very large dent has been made in the relief rolls and the fear increases that at least part of the burden may be permanent.

Over against these factors are others which may be even stronger.

1. The supply of monetary gold in the United States has increased with unusual rapidity over the past several years and, even disregarding its rise in price, is well in excess of what it was in 1929 while commodity prices are considerably lower. This large supply of gold permits an increase in bank reserves thus expanding credit available for use in business.

2. Interest rates are low and it is possible to finance new projects or improvements at low cost.

3. Commodity prices are still low in relation to the 1923-30 level.

4. The general belief that prices are likely to advance further may tend to encourage the purchase of equipment and construction goods to avoid higher prices later.

5. A large shortage of different types of equipment and goods has accumulated over the past six years. Much equipment is worn out and has not been repaired. Technical improvements have made other equipment obsolete.

6. Population has continued to increase during the depression. The rate of increase of the adult population has not fallen appreciably during the depression. Both hospitals and general business will feel the results of this increased market as soon as these people have funds.

7. The fact that business has improved and is improving in other countries suggests that a world business recovery has set in.

8. The process of revival, like that of depression, is a cumulative one. Expansion in the volume of business in one industry stimulates others.

9. Certain of the reforms effected by the national government, such as the Securities Bill, should tend to prevent fraud and perhaps to minimize riotous speculation. This should lead to greater stability.

On the whole the situation is hopeful. While relapse is not ruled out, it grows less probable each month. Hospitals may now plan with increasing confidence for the future.

Clinics in Dayton

AN ARTICLE by Mary Ross in a recent issue of the *Survey-Graphic* describes how all the hospitals and the health department of Dayton, Ohio, closed their clinic services in the spring of 1934, apparently as the result of pressure from the local medical society. Hospital people will find the article worth reading, although Miss Ross apparently found it difficult to get the "inside story" of what happened and why. She seems to think that clinics are likely to be reopened before long in Dayton; some already have been. But whatever may have been the past pressures and whatever may be the future outlook, one point is permanently significant. It seems clear that there was no concerted stand by the local hospitals.

Obviously hospital administrators and trustees must work harmoniously with their medical staffs. Hospital administrators are peculiarly in a position to appreciate, and they do appreciate, the need of full consideration of the interests of the physician. On the other hand, the ultimate responsibility of hospitals, except institutions organized for profit, is public service. Physicians and hospital authorities alike recognize the primary professional obligation, that the sick shall secure care. The underlying issue in extending or reducing clinic service is the effect upon the care of the sick, and therefore upon the public welfare.

How fully were these issues threshed out in Dayton? In the first place, were they studied and discussed among the several hospitals through a joint committee, council, or conference? How thoroughly were they threshed out thereafter, jointly, with representatives of the medical society and of the general public? Issues involved in such matters can not be handled satisfactorily by any one hospital in such a city. Nor can they be properly considered even by conference between joint representatives of the hospitals, and of the physicians. The issues also concern the people as a whole, the taxpayers, the social agencies and their private givers, the

wage workers and citizens generally. The public, through civic organizations of one kind and another should be represented in such discussions.

Miss Ross's story is a strong argument for a cooperative organization, a council or conference of local hospitals in every community of any size; for the studying and weighing of the public as well as the professional issues involved in hospital and clinic services, and for discussion of these issues by representatives of all the three parties in interest. Do not hospitals often lose effectiveness by not bringing the public as well as the medical profession into the arena of conference and discussion?

March Winds

SEASON has a marked effect upon the hospital load. Freezing, snowy weather is less likely to influence the health level of a community than are large and sudden variations bringing ice and subfreezing temperatures in close alternation with wet, warmer periods.

While March winds probably do not augment the hospital's population any more than the changeable temperatures of the previous two or three months, yet now catarrhal diseases are often at their height. Icy pavements fill accident wards with major and minor fractures. Even in Southern sections cold often brings disease. Pneumonia in its various forms, streptococcic infections of the nose and the throat, erysipelas and even nephritis as the result of extensive skin chilling are diseases with direct seasonal incidence.

Within the hospital cold and drafty weather has its effect on the condition of patients. Those in transit to and from operating rooms through improperly heated corridors too often contract pulmonary infections. Poorly ventilated hospital wards and rooms increase the incidence of upper respiratory infections. The infirmary for the care of ailing nurses shows a sharp rise in its population during winter and spring months. Since the peak of hospital occupancy often is reached in the first three months of the year it behooves the administrator to prepare for the full usage of his institutional facilities at that time. One plan for lessening unnecessary illnesses among the nursing personnel is to insist on the use of warm clothing in chilly pneumonia wards and the wearing of masks when caring for patients suffering with pulmonary diseases.

Surely hospitals should practice preventive medicine at home before urging it on others.

The Business Survey of Hospitals

EVERY hospital superintendent in the United States is supposed to have received recently a letter from the surgeon-general of the U. S. Public Health Service, and a questionnaire which is sponsored jointly by the U. S. Public Health Service and by the U. S. Bureau of the Census.

The U. S. Bureau of the Census has been accustomed to make surveys of business every few years, sending questionnaires to many thousands of establishments throughout the country. This year it was decided to include hospitals and the U. S. Public Health Service is cooperating with the census bureau by taking over the administration of this branch of the business survey. The form includes questions regarding the finances of hospitals as well as their operating statistics, their personnel and the character of their organization.

To how many hospital superintendents are questionnaires an almost daily diet? And how many of them find them rather indigestible? In this instance, however, hospitals should give this questionnaire their sympathetic attention. There is likely to be good meat in it. The American Hospital Association, the American Medical Association and the American College of Surgeons have all cooperated with the Public Health Service in the undertaking. The information sought includes facts which up to the present time have not been secured on a national scale by any of these organizations. Hospitals can be assured that the material will be held confidential, as the Bureau of the Census thus handles all information furnished it by individuals and by business firms. The name of no individual hospital will ever be revealed, its figures being buried within the statistical tables.

At the present time hospitals all over the country are greatly concerned about finances. The census report should supply authoritative data on the needs of the hospitals as a whole, and of each state and important local area. There can be little doubt that government authorities and the general public which supports hospitals will be startled to a realization of the financial needs of our institutions by what this business census of hospitals is likely to reveal. The advice of the three organizations above mentioned has been sought for aid in determining what tabulations and analyses of the figures will be made, so we expect that the figures gathered will be studied with a view to practically useful purposes, and will not serve only to make "just another statistical report."

Hospital Service for Rural America

By LESTER J. DICKINSON

U. S. Senator from Iowa

AS A matter of sound national policy it is time that we broadened America's farm program. There are human as well as economic factors. To date the economic needs of American farmers have been so serious that they have dominated our thought. We have given but little consideration to other aspects of rural life.

Our federal and state governments have shown more interest in the virility of the cattle, sheep and horses, and of the wheat, cotton, corn and hay on our farms than they have in the health and robustness of the men, women and children who constitute our agricultural population. We have spent far more money and effort in animal husbandry than we have in human husbandry.

While I have long and publicly recognized the vital necessity of finding a sound, constitutional solution to the economic problems of agriculture, I believe the time has come when we should at the same time give more attention to the health and welfare of our rural population. The appropriation by Congress under the Social Security Act of \$8,000,000 to the United States Public Health Service for the development of public health services in the various states is a step in this direction but only a step. Activities carried on by public health officers are intended to prevent disease not to cure it; most of their activity concerns those particular diseases which strike down a great many people at one time or which can be prevented by wholesale measures. Such work is eminently valuable and we should have much more of it in rural areas. But, for some time to come at least, we shall not be able to prevent all illness. Therefore we ought to be equipped to meet it.

Inadequate Rural Hospitalization

About a year ago there was published in this magazine a survey of the distribution of general hospitals throughout the United States. I was much interested in that survey because it showed so clearly that the areas that had no hospitals or an insufficient supply were all rural. Most of them were in the South or the Middle West.

Our rural people should have hospital facilities available to them within reasonable distance. Of course there are areas where the distances are so great between farms and settlements that we cannot expect to locate hospitals there. But there are

many other areas where there are plenty of people to use a small modern hospital but none is available for thirty, forty, fifty miles or even more. This means delay in getting to the hospital.

There is another even more urgent reason for insisting on a sufficient number of hospitals in rural areas. The modern doctor comes out of medical school accustomed to the use of all kinds of new equipment and to help from a variety of technical experts—the nurse standing at the top of the list, probably. When he has finished his internship at a good hospital in a large city he is not eager to go to a small town if there is no hospital in it. It is pretty likely to look to him like professional suicide. Whether he is right or wrong about that is beside the point. I know from years of observation that it is not easy to get a well trained young doctor to come to a small town and stay there if there is no hospital.

Why are hospitals lacking in the rural areas? Not because of any lack of appreciation. Farm people want to preserve their health just as much as city people do. But many of the urban hospitals were built with gifts from one or a few wealthy individuals. We just do not have many people living on farms who have enough money to give a hospital to the community and then endow it sufficiently so that it can keep going through good times and bad. Nearly all large cities have city or county hospitals, too. Here again we run into a problem. While we have quite a few county general hospitals in various rural regions (it is of interest here to note that Iowa many years ago passed a law permitting counties to build general hospitals for community use), some counties just cannot assume the added burden.

Of course we do not need a hospital in every county. It is certainly better to have a few hospitals where they can most effectively serve the people than to put up hospitals hit and miss to gratify local vanity. One thirty-bed hospital, other things being equal, should be much more useful than two of fifteen beds each. But we must not expect our farm population and our rural doctors to go too far even to a good hospital.

How can we get these needed hospitals and how

A statesmanlike approach to the health problems of our rural population is demanded by one of America's leading national students of farm problems, Senator Dickinson

can we keep our present rural hospitals up to scratch? Social services such as education, care of the poor and hospitalization have, until recently at least, been considered matters of local concern. That is wise and proper. They ought to be matters of local concern and when the citizens cease to be interested in their local social services democracy in the United States will be at an end.

The health of the people, however, is also a national concern. Without a healthy citizenry we cannot achieve the possibilities that lie within us as a nation. Health is the first wealth—without it all other is dross. The national government, therefore, does have an interest in and a responsibility for the nation's health. Furthermore, as a practical matter, we know that many of these rural areas cannot be provided with even a minimum of health care without some aid from outside. The problem is to give this aid without removing local responsibility, interest and initiative.

That is not an insoluble dilemma. We have been told recently by the supreme court that the federal government cannot assume dictatorial powers over the individual. But a program of federal and state cooperation can be worked out that will prove of permanent benefit. This program should embrace both the building of hospitals and their maintenance. It should be so planned that it supports rather than competes with the rural doctor who has courageously and often at real sacrifice devoted himself to serving our farm population.

Under the constitution the federal government could appropriate funds to be allocated to the states in such cooperative work. This would simply be following out the rules already laid down in the creation of land grant colleges, the policy of extension service and federal aid to highways.

There are many examples of the effectiveness of cooperation with the states. A program embodying such a policy would not be experimental. There has never been a recommendation that the federal government should control the construction of highways. Control over personnel and expenditures is left within the authority of the state highway commissions, as it should be.

No extensive federal bureaucracy should be set up in Washington to carry out such a program. The United States Public Health Service with its marine hospitals, the Bureau of Indian Affairs with its hospitals on reservations, the Army and Navy with their respective medical branches, and the Veterans' Bureau with its large hospitals scattered over the country have enough trained personnel to handle the federal administration. The Public Health Service would probably be the best agency through which the money should pass.

Need Must Be Shown

No hospital should be granted financial support under this program or any new hospital built unless there is clearly a need for it and this need has been certified by appropriate local and state health and medical authorities. Where physicians have built and maintained hospitals out of their own resources and these have proved inadequate, careful consideration should be given to the possibility of their purchase and use as a basis for a larger hospital program.

Costs, both capital and operating, should be shared on an equitable basis by the federal, state and county governments concerned. I understand that the Duke Endowment has demonstrated in the Carolinas that only a modest outside subsidy is necessary to maintain hospitals of good quality in rural areas. Canadian experience with provincial subsidies has also been extensive and distinctly encouraging. The readers of this magazine are, of course, familiar with the details.

While I was asked to discuss the problem from the standpoint of the rural population, I certainly do not want to indulge in special pleading for them. If similar aid is needed in cities, it should be available on similar terms. No industrial civilization can survive that disregards its human resources and does not make provision for depreciation and wear out of human material in the same way that it sets up reserves for its plant and machinery account. Likewise it must provide for repair of these human resources when injured through disease and accident.

As Long as We Have a Roof—

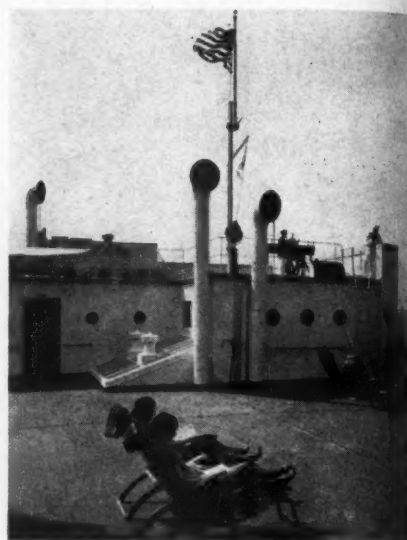
By RAYMOND P. SLOAN

AS LONG as we have a roof over our heads, let's do something about it. Never mind if after the lean years it does look a bit frayed at the edges or suspiciously naked in spots. All that can be rectified, and at not too great cost. It is a roof, nevertheless, on which the sun bestows generously its full rays, to the accompaniment of fresh cool winds. What matter if its panoramic view be of distant hills and valleys, or drab housetops! It affords abundant air and sunshine, bringing new life and health to the convalescent patient.

Before the roof emerges from the chrysalis state, however, and assumes new color, it should be carefully checked for adaptability to patients' use. Is it easy of access? Can wheel chairs or beds be carried directly to it by elevator? Or is it available only to certain portions of the hospital and reached by a circuitous route? If so, better ask nothing more of it than to continue as a roof.

The roof we contemplate transforming into a garden for the benefit of the hospital family is fortunately well adapted to this purpose. Patients are merely moved from the rooms and wards be-

Blue skies, warm sunshine and we were almost going to add, a smooth ocean. The S. S. Polyclinic is launched permanently on top of the hospital bearing that name.

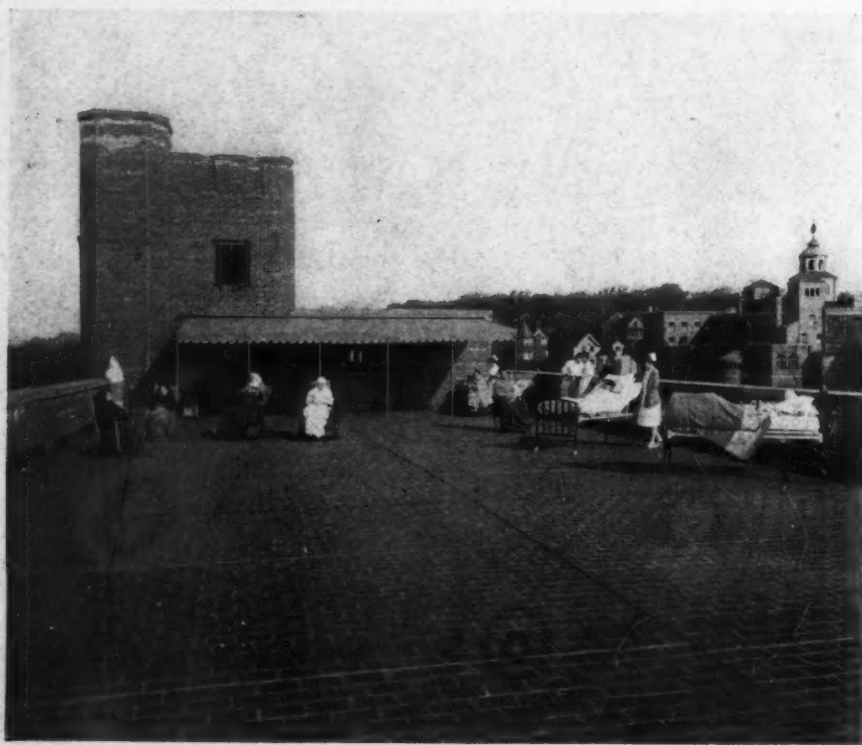


low on to the elevator which deposits them right by a door leading to a sizable open space.

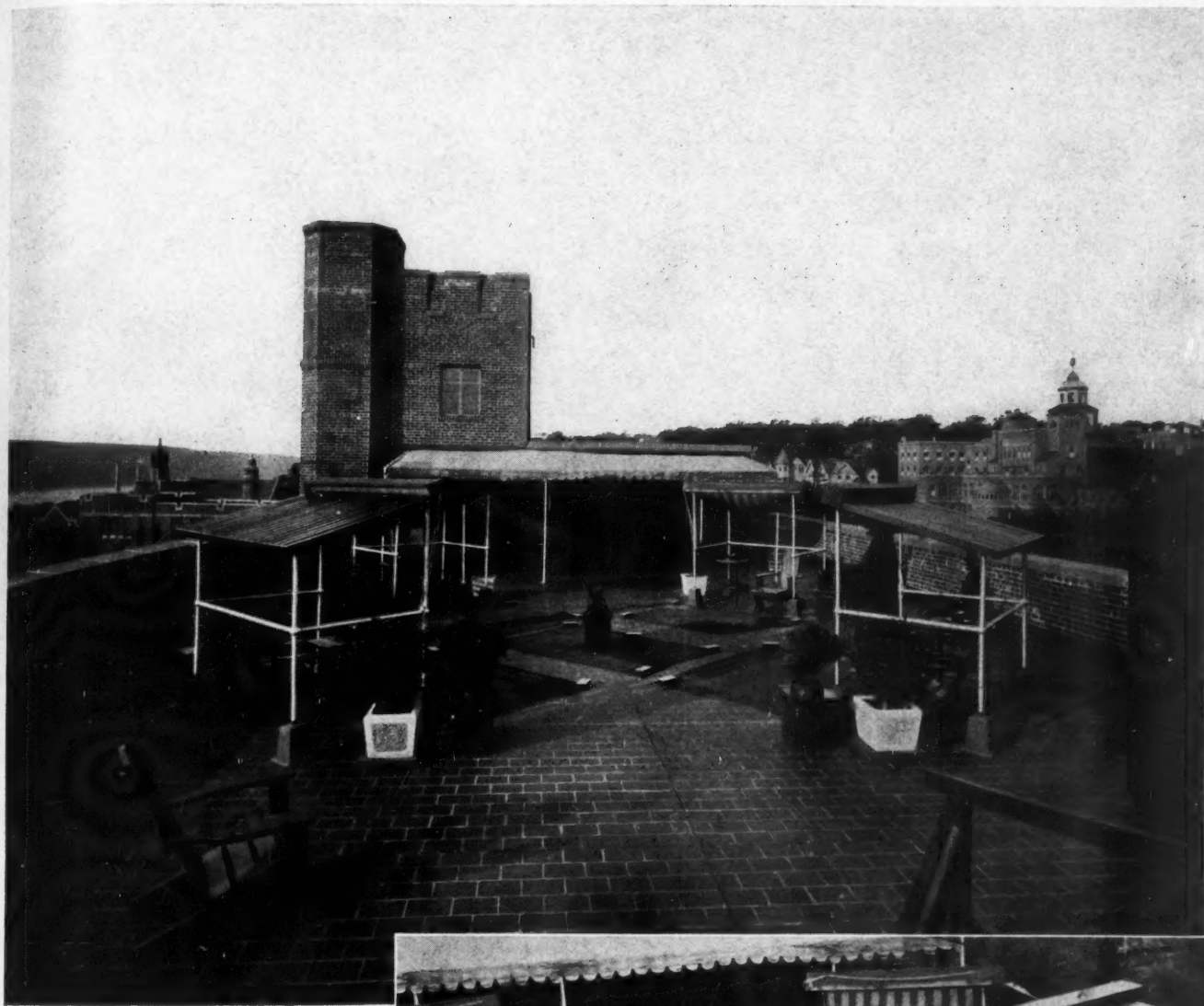
Thanks to the far-sightedness of the architects or perhaps to the size of the building fund, our flooring is red tile. Nothing could be better. No need, however, to become discouraged if it happens to be tar and pebble. There is a happy solution to this problem.

Treat such a roof with emulsified asphalt. It can be put on to provide an even surface and will be found not to stick. Then, coat it over with fine ground screened stone. This can be had in different colors—a soft green, for example, is extremely suitable. Run a roller over the surface, brush off the excess stone and you have a substantial flooring which will withstand the cold and heat and provide soft resiliency that is pleasing.

Even the best of roofs are not above succumbing



Before the stage is set. Plenty of sunshine and air, but little else with which to attract the convalescent.



Setting for the first act! Canopies built on iron frames, large enough to cover a bed or chair and table afford protection from the sun. Shrubs in cement tubs and unique wooden stands help to make a real roof garden.

Setting for the second act! More flowers, more shrubs and an observation platform from which a view of the beautiful surrounding country may be obtained.



to the throes of depression. This unfortunate condition may be detected at a glance by the presence of puddles after rain storms. Before applying the emulsified asphalt, therefore, make sure that the grading is correct, ensuring all water being carried to the roof drains. Slag is recommended for filling in over which the asphalt can be applied as a binder.

It is sometimes a temptation to take the easiest way which more often than not leads to trouble. Therefore, heed not the advice of those who would cover the roof with wooden slats. It is surprising what a fine assortment of dirt, cigarette and cigar butts will collect in a very short time and water as well, producing decay which will require constant repair and replacement. Regard slat flooring, therefore, as extravagant and unsatisfactory procedure.

More controversial than any other point is the height and type of railing which encircles the roof. Naturally, it is desirable that every advantage be taken to give the patient something to look at. A solid enclosure of brick, stone or some similar material precludes this, that is, if the railing is 4 feet high which is as low as it should be. Substitute wooden rails or iron spikes for the solid material, and there is always the danger of drafts.

The happiest solution, therefore, would appear to be a solid fencing of about four feet. As un-

fortunate as it may seem to shut out the view, sunshine after all is the primary requisite. There is a way, too, of taking advantage of the landscape despite the presence of a solid wall, as will be seen later. If a high wall is desired, an iron spiked railing may be affixed to the brick or stucco foundation.

At about this stage of the proceedings, it is well to give some thought to the general scheme of roof decoration. This may be just as elaborate as desired, or as simple. Nor is it altogether a matter of expense. Given a fairly clever carpenter who may already be on the hospital pay roll and a painter who knows colors and the results will prove a revelation. Some discretion will be required as a curb to over stimulated imagination to hold the layout within the realms of practicability. The roof is designed for outdoor living and must be maintained at minimum effort and expense.

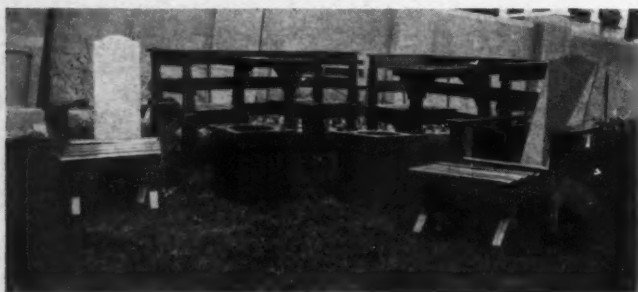
Creating a Marine Atmosphere

The roof as a sun deck has in some instances stimulated the imagination to create for it a marine atmosphere. The possibilities are evident at once. Picture ugly pipes or air ducts transformed into white smokestacks encircled with broad bands of bright color. A few cans of fresh white paint applied judiciously by a painter possessed of some imagination will work wonders. Once the final coat has been applied, a few steamer chairs placed here and there, possibly an electric ship's bell at the entrance, or a life preserver or two and the stage is set.

Continuing the marine theme, if the surrounding wall is brick, try a blue-green as background. At the bottom, through the middle and at the very top, apply a white band to represent the rail with upright posts painted at regular intervals. Then, here and there between the posts hang white life preservers. It will not require too much imagination on the part of the patient to picture himself looking through the rail at a vast blue ocean.

Assuming that it is not the intention to carry out any clearly designed scheme of decoration but merely to make the roof just as attractive as possible at modest cost, what then? First, assemble some ideas or definite plans, if possible, and go into a consultation with the hospital carpenter and painter, remembering that every piece of furniture or equipment must be rugged and able to withstand high winds, hot suns and heavy rains.

A few leaves might well be taken from the notebook of Captain Harry H. Warfield, superintendent, St. John's Riverside Hospital, Yonkers, N. Y., much of whose time outside of business hours is spent in the hospital carpentry shop, building furniture to his own specifications,



Well designed for the roof. First, the Bar Harbor type of chair with comfortable sloping back and leg rest. Second, a fern stand raising the plant above the hot roof and permitting plenty of air to circulate about its roots. Third, two units comprising a table and two chairs, making a four-some ideal for a game of cards or afternoon tea. No danger of tables and chairs becoming separated. They are built in one piece of cypress heavy enough to withstand the wind and the rain.



All passengers on deck ready for an afternoon siesta in the warm sunshine. Showing how successfully marine atmosphere can be introduced on a hospital roof with excellent effect.

suitable for use on the roof or in the garden.

One design which has proved especially successful, Captain Warfield has adapted with certain modifications from the familiar Bar Harbor or Gibson Island type chair. He selects cypress measuring $1\frac{1}{4}$ inches to assure greater strength and weight. With this chair he supplies a leg rest which he makes practically the same height as the seat of the chair. Made in his own shop, these chairs cost about \$4.50 each.

There is always the possibility of tables and chairs becoming mixed. So Captain Warfield conceived the idea of a table and two chairs in one unit which could not be separated. He designed these so that two of these units put face to face make a foursome—ideal for a game of bridge or a light luncheon or tea. Adequate room is provided for access to the seats, and the proportions are carefully worked out with just the right incline to the back of the seat for comfort. These units are also built of cypress at an actual cost per unit of two chairs and table, including material and labor, of \$7.25.

Where there is a view, why not make the most of it despite the necessity of some sort of railing? For the patient who wants to see what is going on about him, Captain Warfield has designed an observation platform. This is merely a 16-foot square wooden platform built on four-by-fours

with joists of proper dimensions. He uses preferably $1\frac{1}{4}$ by 5-inch flooring planks spaced a quarter inch apart to prevent decay. Around this he sets up a railing 3 feet high made of two-by-three dressed posts and rails with a 3 or 4-inch cap board around the top of the railing. The platform is reached by a ramp 4 feet wide to allow for a 3-foot bed. The expense involved is about \$75.

Such an observation platform might well have a decorative scheme all its own. Here again there is the possibility of a replica of a sun deck on an ocean liner. Or it may assume the guise of a garden with long window boxes filled with summer flowers interspersed with small firs, boxwoods or privet in tubs.

Equipment of the well-dressed roof should include at least one or two sun houses for those who prefer to expose themselves well-undressed. Those provided for St. John's patients measure 5 by 7 topped with a cone pitched roof both sections of which open and fall back against the sides of the house, the entrance door being on the end at one corner. A ridge pole runs through the center to provide necessary strength, the sections closing together over this pole. Each section, too, has iron or steel arms which fit over a pin when the roof is enclosed to prevent it from being blown open. These arms are also useful in swinging the section open or closing it.

The interior of the sun house is made of two-by-four dressed framing covered with beaded tongue and grooved wainscoting and may be painted as desired. It is possible to secure an attractive mother-of-pearl effect by using platinum paint mixed with green. The house is big enough to hold a cot built about hospital bed height covered by a thin mattress. The cost complete is \$75.

As desirable as are the rays of the sun, at times some protection is necessary. This, in fact, is most important in planning the roof garden. The problem is easily solved by frames built of galvanized iron beneath which a bed may be rolled or chairs placed. Pipe, 1¼ inches thick is used for this purpose, properly weighted at the bottom with concrete blocks enclosed in wood. These are built about one foot lower in the rear than in the front to provide pitch. The tops are made of 1 by 3 slats spaced one inch apart so that the patient can have partial shade. If complete shade is desired, an awning may be rolled over the top and halfway down the back. A small awning fitted to the front extends down about two-and-a-half feet which is helpful in overcoming extreme glare. A housing at the top of the slat roof receives the awning when rolled up. Captain Warfield figures these frames at about \$60 each.

Accessories, an important part of any decorative plan, contribute materially to the success of a hospital roof. Provision should be made for an abundance of shrubs and flowering plants which in turn demand an adequate supply of stands and holders. Roots soon dry out when placed in pots directly on a hot roof. Therefore, it would be better to try a flower stand made of wood some 17 inches high and about 12 inches square, having a circular hole in the top with a diameter sufficient to accommodate a 9 or 10-inch pot. The sides are slatted affording adequate ventilation.

Artistic Flower Tubs Need Not Be Costly

It is surprising, too, what artistic flower tubs can be made with cement. The cement is mixed with sand, to which is added broken china crushed to about quarter-inch pieces. Carefully mixed and slightly rubbed after removal from the form, the effect becomes almost mosaic. Many different sizes may be made and as many shapes.

Ash trays, always a problem inside, become even more difficult when high winds blow. Perhaps a careful search will reveal some heavy copper balls measuring about 7 inches in diameter, once used as floats in old steam traps. Captain Warfield had these cut in two and each half mounted on a heavy hardwood block. The result is an ash tray indestructible, and of ample proportions.

A few grass rugs or even heavy linen washable rugs may help the general appearance of the roof. To overcome complaints from passers-by who may report the sight of a magic carpet descending perilously near their persons, it would be well to secure heavy bricks, paint them whatever color seems desirable and place them at each corner of the rug. There is an advantage in having these plainly visible so platinum paint is recommended.

The effect would be incomplete without a certain number of cushions on chairs and benches. These can easily be made of heavy orthopedic felt covered with slips of any material that may be desired. Many types of waterproof and rubberized fabric are available, some of which, however, are not always as soft as may be necessary. At St. John's salt sack material is used which looks much like unfinished linen. This has been found extremely durable and easily washed.

Furniture Must Withstand the Elements

Every piece of equipment which goes on the roof should be carefully studied for its practicability. It must be heavy enough to stay in place, durable enough to withstand all weather conditions, yet sufficiently comfortable for patients' use. If properly constructed of suitable materials, a fresh coat of paint each spring when the equipment is removed from winter storage should ensure adequate service.

Maintenance of a roof garden brings added responsibilities, it is true. On the other hand, it has been found that once the interest of the personnel has been aroused, its upkeep presents no serious problem. During the hours on which they are on duty, the porters should look about occasionally to see that everything is as it should be. They should also be prepared to act in emergencies as when summer showers appear unexpectedly. After the day is over, accessories such as cushions and pillows should be removed. It is desirable to have a maid visit the roof each morning and get it in readiness for patients and their guests. Yet all these are details which may be incorporated into the procedure or eliminated as seems desirable.

Long hours spent in the warm sun, particularly during the spring and fall—patients receiving guests in the fresh air, entertaining them occasionally at cards or at afternoon teas—convalecents stretched on beds, gossiping idly as the fresh wind brings color to their cheeks—here is a picture worth studying, particularly during these days when modernization programs are being considered anew. The conclusion may well be, "Yes, we still have a roof over our heads and what is more, we're going to do something about it."

Design for Saving

By EVAN PARRY, F.R.A.I.C.
Architect, Toronto, Ont.

Save six inches here and a foot there, lower a ceiling, raise a floor, substitute administration for superfluous equipment —we present the new small hospital, economical, efficient

THE area of floor space required for patients is a vexing question owing to the great divergence of opinion in even the best informed hospital circles. Modern planning on this continent prescribes 90 to 100 square feet of floor space for each ward bed, although in Europe, particularly in Germany, 80 feet is considered efficient. The large ward of twenty or thirty beds is considered passé today, and it is gratifying to note that in most of the new construction four to six-bed wards are common, enabling the architect to provide the prescribed area more economically and further prevent overcrowding.

The most economical and efficient way to prevent overcrowding is to subdivide the floor area of public wards into cubicles containing four beds each, each bed separated from its neighbor by the steel roll curtain system. The curtains should project slightly beyond the bed and be 7 feet high. To promote neighborliness and flexibility, the curtain may be drawn aside. With this plan a ward of eight beds and a subutility room can meet medical technique requirements and simplify administration.

Criticism Is Justified

Much criticism has been heard of late as to the extravagance involved in providing separate fully equipped bath and toilet rooms for private patients. Many are of the opinion that this toilet accommodation has been overdone. Are we justified in perpetuating the practice of yesterday in prescribing that all private rooms be about 15 by 10 feet? It is true that with this size room private toilets and all the space necessary for the proper care of the patient are provided. Nevertheless the larger proportion of toilets, especially in the surgical wing, could be planned to function for two private rooms, in which case a considerable floor area could be saved. Such rooms could be reduced to 13 by 9 feet, saving 33 square feet of floor area.

In the average hospital under 100 beds, it can safely be assumed that the restricted length of

corridors makes possible the reduction of their height appreciably from the height necessary in corridors in larger hospitals. Splendid opportunity is afforded when remodeling to reduce the heights of existing corridors and run the service pipes and conduits in the space thus salvaged.

It is questionable whether there is any justification for corridors exceeding 9 feet 6 inches in height in the smaller hospitals, and more often than not 9 feet will not detract from their efficiency. Even if the building is not mechanically ventilated, the frequent entering and reentering of the various service units on each floor will provide the necessary changes of air required for hygienic purposes.

Many hospitals have corridors either too narrow or too wide. After all, the corridor is a service lane and the governing factor in its width is the transportation of bed patients. If a bed can be taken out of a room or ward and turned in the direction desired that is all that is required. Other services are subservient to this. The 7-foot corridor, found in many recently built hospitals, is satisfactory if precautions have been taken in the construction of doors to wards and rooms. Eight feet is the more common practice, but if a one-foot or even six-inch strip can be saved in the width of the building, it does not take a great stretch of imagination to realize the saving effected in the cost of the building.

Doors to the hospital have in the past been provided without much thought to successful administration. Is it not a fact that in the hospital under 100-bed capacity comparatively few such openings are required? For instance, a hospital under fifty beds needs a main entrance which doctors, staff, visitors, out-patients and emergency cases can use, and only one more for supplies. The hospital of 50 to 100-bed capacity may be justified in having separate entrances for the out-patient department and the emergency and ambulance units in addition to those already men-

tioned. These four meet all requirements. However strict the administration may be, too many entrances offer easy opportunities for dishonesty.

Much twaddle has been written regarding the use of rooms that are below grade. Surely in the small hospital there can be no objection to planning an out-patient clinic with its floor level 3 feet below grade. The same is true of kitchens, staff dining rooms, and even x-ray, physiotherapy and laboratory units. Most of us have seen some delightful results when this arrangement has been planned intelligently.

When land is available at a moderate price and a one-story building is desired, it may be feasible to arrange those units on the first floor. That is a matter governed entirely by local conditions, climatic and otherwise, particularly in Canada

and northern states. One architect has stated that in a twenty-five to thirty-bed hospital of one story a saving in floor area of approximately 16 per cent of the total area of the building in comparison with a three-story building of similar capacity is possible. Before the placing of units below grade is advocated a careful calculation should be made as to the relative costs.

The question of clothes chutes in small hospitals is a moot one. Though the personnel of the small hospital is limited, the cost involved in constructing a proper hygienic clothes chute with modern inlets and outlet is a questionable expense. With efficient administration and with the duties of the personnel definitely assigned, a chute is unnecessary in the small hospital and I for one would not advocate its installation.

A Picture of Clinic Service in Chicago

By ALEXANDER ROPCHAN

Executive Secretary, Health Division, Council of Social Agencies of Chicago

MOST of Chicago's clinic needs in the general medical field are supplied by non-government clinics. These clinics have been heavily overburdened during the past few years. They have depended for substantial "emergency" financial support upon payments from relief funds and community funds for care of relief cases. They are under suspicion of the organized medical profession. They are struggling with medical social problems that require a more adequate community program. Hence it was important to have facts about their service.

In January, 1935, Chicago's clinics began reporting on various items of service agreed upon by the statistics committee of the clinic section of the Council of Social Agencies. Hearings with representatives from each clinic were used to obtain uniform interpretation of these items.

An analysis was made for the second quarter of 1935 of three reported items, namely, free visits, rejections and patients admitted who had never previously been served.

The average ratio of free visits to total visits was 71 per cent. It ranged from 7 per cent in two clinics to 100 per cent in twelve clinics. The median ratio was 80 per cent; that is, half of the ratios were higher than 80 per cent and half were lower.

The average "never previously served ratio"—ratio of admitted patients who had never previously been served to the total number of individuals served during the period—was 64 per cent. It ranged from 12 per cent to 95 per cent. The median was 70 per cent.

The "never previously served" ratio is a partial index of turnover of patients. It does not reflect the turnover of old patients who may have been readmitted for a new condition. Factors influencing the ratio include: (a) size of emergency service; (b) extent of services to patients requiring long time care, e.g., orthopedics, syphilis; (c) extent of services to patients with chronic conditions; (d) effectiveness of social service follow-up; (e) extent to

which intake of new patients is controlled and limited to number which can be served adequately, and (f) extent to which old patients are weeded out when the clinic has substantially performed its job. Other factors influencing this ratio will occur to those who know the problem.

Other things being equal, a high "never previously served ratio" will be associated with large emergency services, with services restricted to short term acutely ill patients, with inadequate social service follow-up, and with an intake that is not well controlled. The "never previously served ratio" will be low in clinics for the diagnosis and treatment of syphilis and gonorrhea, orthopedic conditions and cardiac conditions. A low ratio may be associated with an ineffective system of "weeding out" old patients or with effective social service which reduces lapsed treatment and excludes patients with minor conditions. One cannot draw conclusions from individual "never previously served ratio" without study of the factors involved.

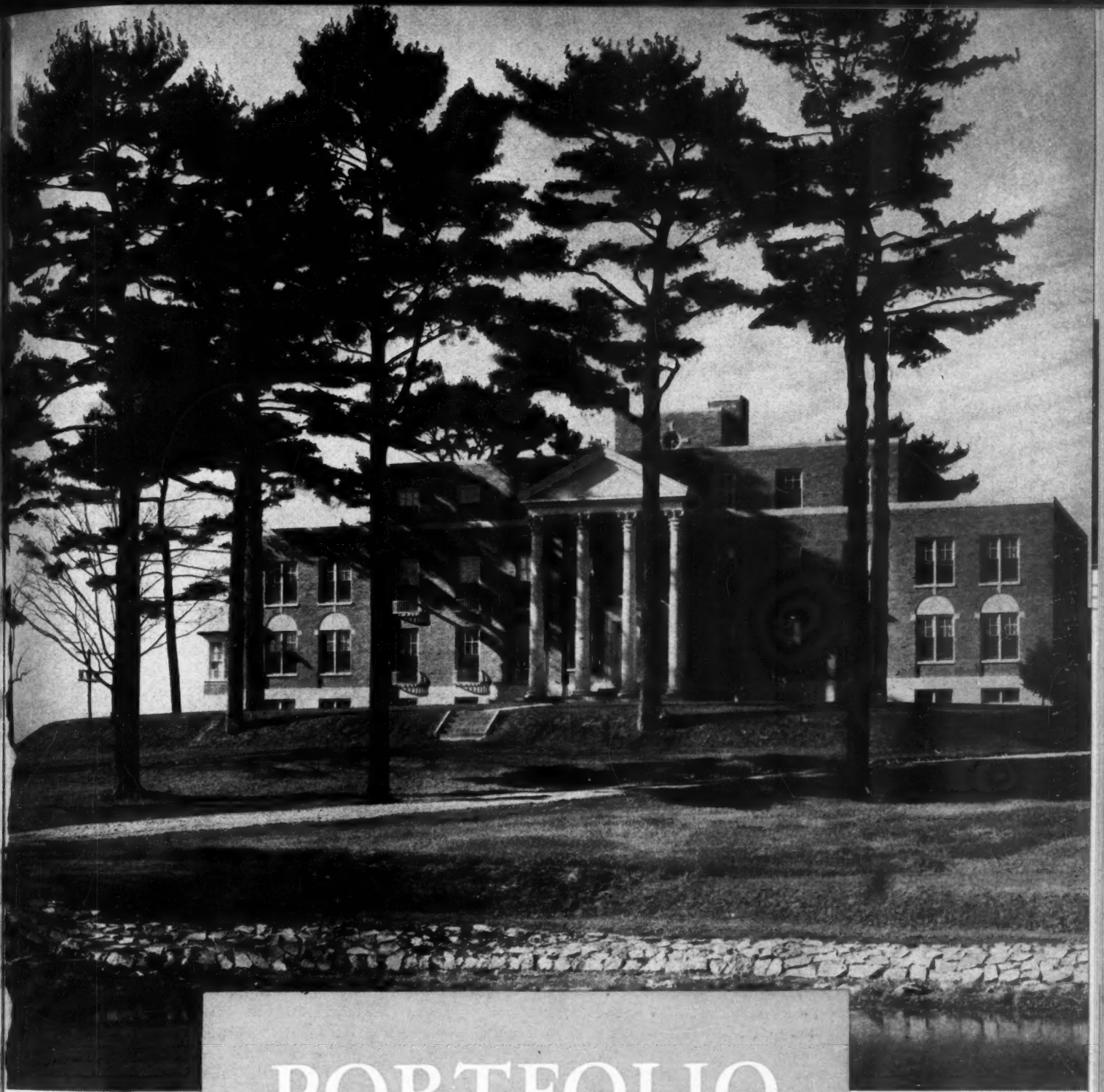
The "rejections ratio"—ratio of personal applicants rejected to "never previously served" admissions—averaged 31 per cent. It ranged from 4 per cent to 127 per cent. The median was 16 per cent. The rejections ratio is only in terms of new applicants—applicants never previously served in the clinic. Comparison of total rejections (5,924) to total personal applicants (25,854) for the reporting clinics shows that 23 per cent of the combined total of applicants were rejected.

The following reasons for rejections were given by reporting clinics: referred to own physician, 1,053; referred to another physician, 440; referred to clinic in which patient was previously registered, 1,085; type of care required not provided, 625; clinic capacity reached, 1,119; other reasons, 1,602.

These do not include rejections of telephone applicants and applications by mail or otherwise. Many clinics with appointment systems discourage application in person.

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PORTFOLIO OF PLANS

Smith-Esteb Memorial Hospital, Richmond, Ind.

Walter Scholer, Lafayette, Architect; Werking & Son, Richmond, Associates

FOUR columns from the Esteb home grace the new fifty-bed tuberculosis hospital pictured on the preceding page. It was constructed at a cost, excluding movable equipment, of \$80,107. Movable equipment, including linens and china, comes to \$14,524.30 more, making a cost per bed of \$1,892.60. It must be remembered that this includes nurses' living quarters. The building is strictly fireproof in construction, and stands on ground presented to the county by Mr. and Mrs. Esteb.

Furniture in the reception room and in patients' rooms is northern birch; upholstery is of red leather. Automatic stokers, an incinerator and a water softener are included in the boiler room equipment. A laundry is provided.

COMMENT: This hospital plan reflects recent developments in the care of the tuberculous. Owing to the fact that resources are usually limited, the institutional care of the tuberculous is best used to isolate the source of mass infection, *i. e.*, the open case. There are those who recognize this primary purpose and let it be reflected in plan in spite of hoary tradition of thirty years! The same group also questions the dicta—even when given by national associations—that bless the open-air porch, 12 to 16 feet wide, in front of typical patients' rooms such as these. They would point out that these inside rooms (for that is all they are) are sunless and poorly ventilated, an ideal breeding ground for the tubercle bacilli, and that similar conditions in any apartment houses or in tenements are theoretically prevented by law. This should be enough to prevent pest breeding types of sanatoriums.

So it is refreshing to find this plan in Indiana. There isn't a single open air porch on this sanatorium. And the windows are of normal hospital size. Patients arriving here aren't expected to metamorphose themselves into polar bears. As a consequence, they will probably stay longer, and so much as they remain out of circulation decrease the chances of infecting others.

Enough generalities.

The planning of this building is simple and direct. A number of architects who have struggled with the problem of a grade or ambulance entrance to the building might study how simply it is done here.

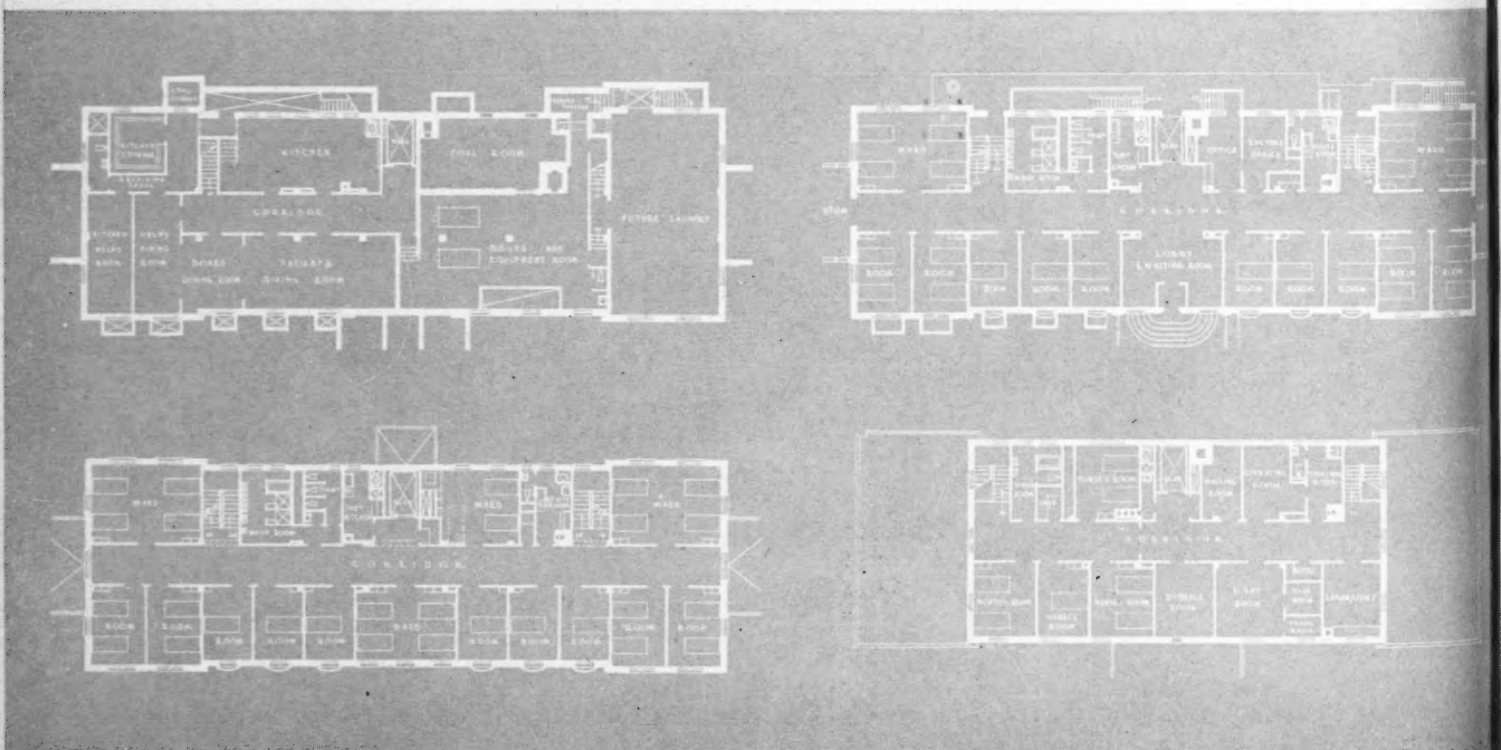
Especially to be commended are the small wards, none larger than four beds. Bearing in mind the length of stay and the clash of personalities, this seems especially important in sanatoriums.

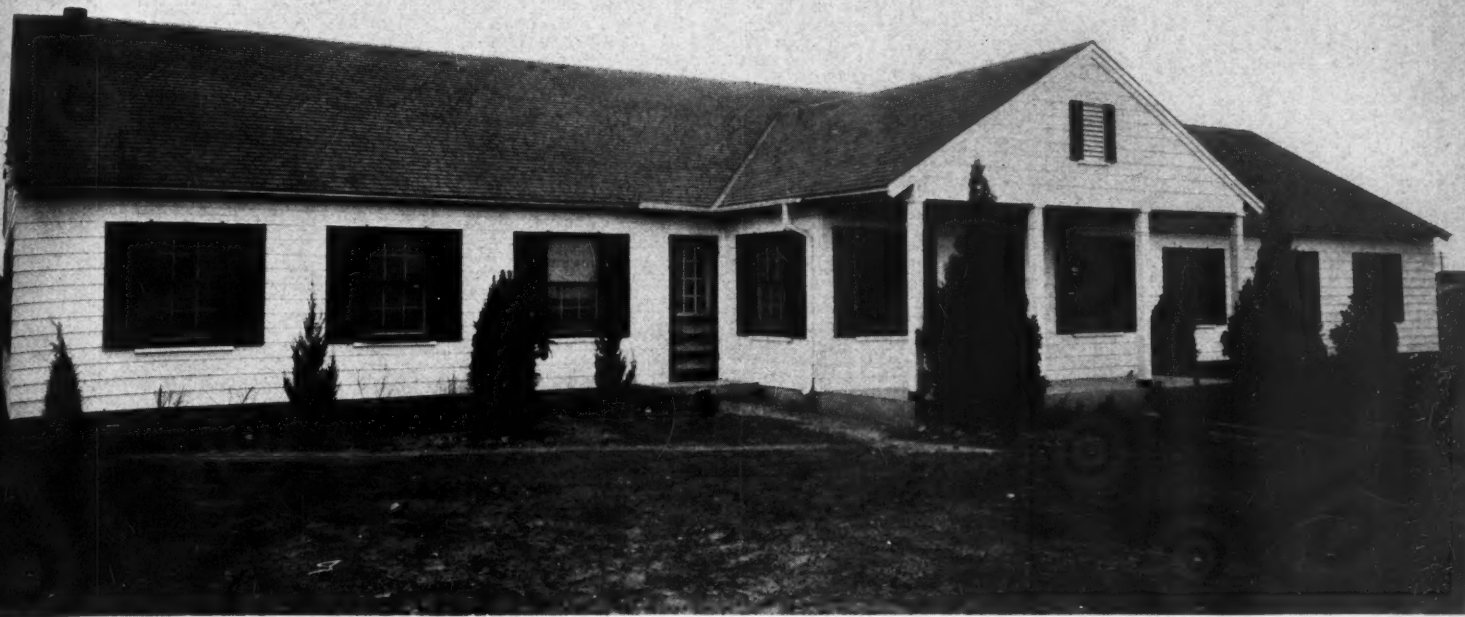
As tuberculosis is an infectious disease, it is to be regretted that somewhat more provision has not been made for aseptic nursing technique. A lavatory in each room would have helped measurably in that direction.

The laundry seems to be so located that there is no way of getting the clean linen out except by means of a strong back. It seems as though it would be possible to interchange the laundry and the boiler room, thereby giving it easy access to the elevator.

Housing nurses in a hospital building is always a doubtful practice but in this case they are well segregated on the third floor. The complete medical services on the third floor are liberal, though the operating room looks small even for the needs of sanatorium patients.

Basement and first floor plans are shown immediately below. At the bottom of the page are second and third floor plans.





Wilson Hospital, Wink, Tex.

Albert H. Boren, Dallas, Architect (deceased)

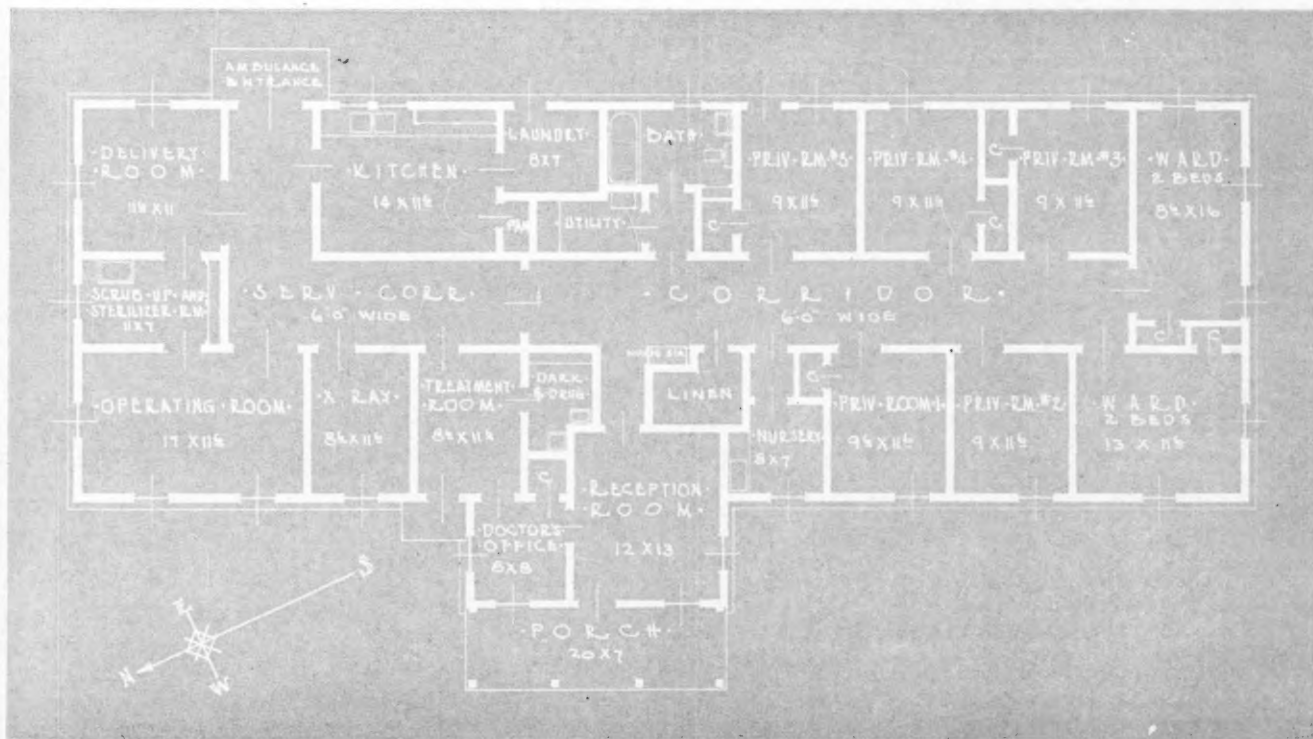
THIS hospital of nine beds cost approximately \$6,300 or \$700 per bed. It is of frame construction, with cement floors and base. It is located in an oil town of mushroom growth which may be abandoned. Storage space is provided in the attic, made accessible by a disappearing stairway in the service corridor. Private offices for Doctor Wilson, the owner, are provided.

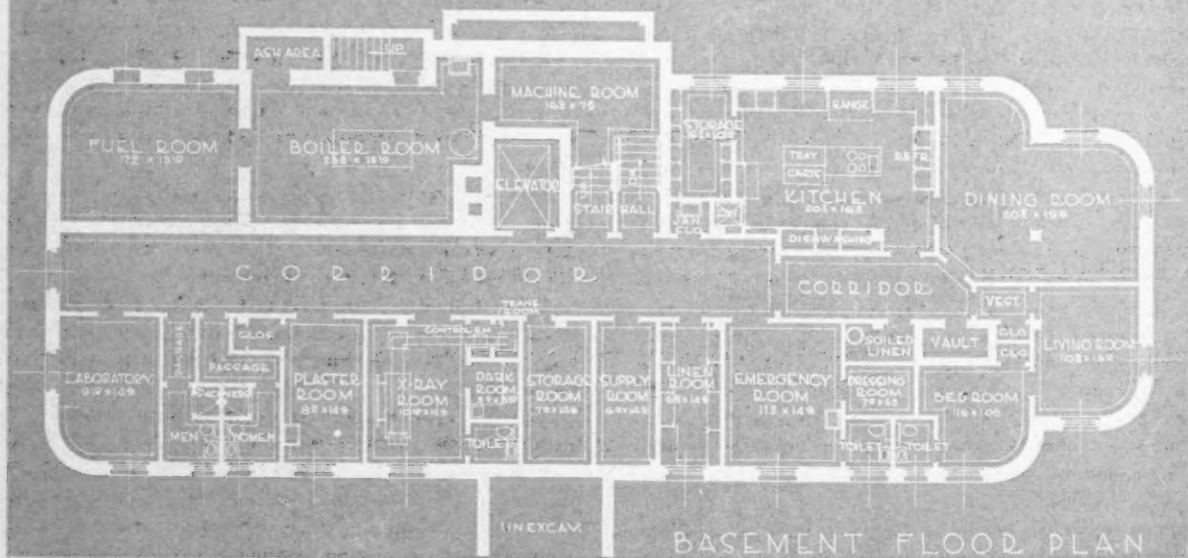
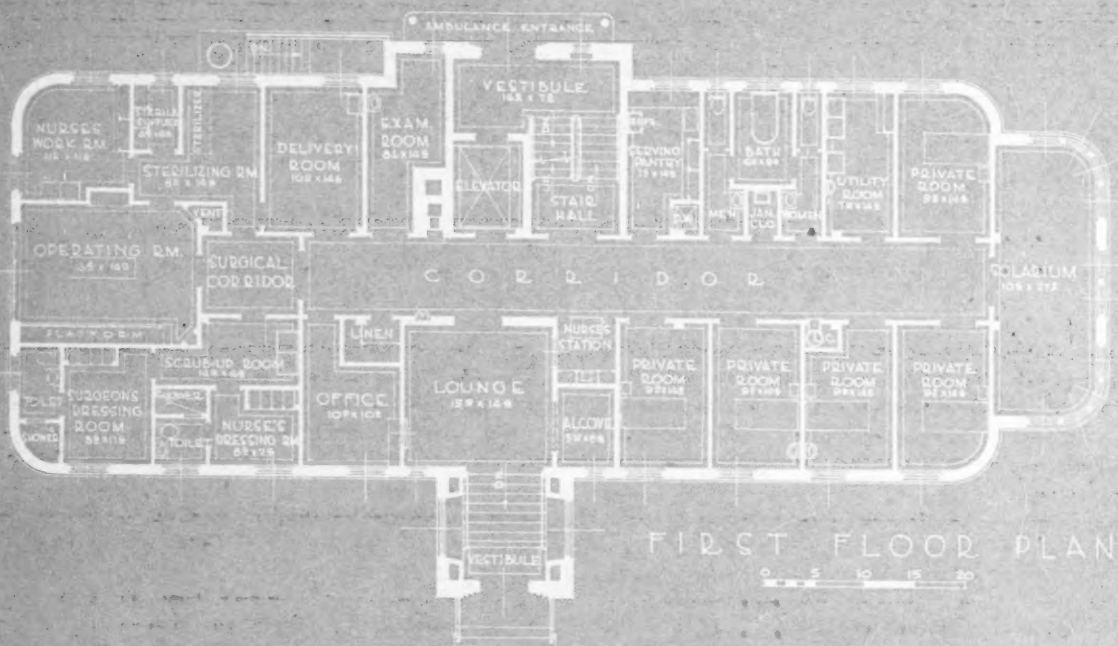
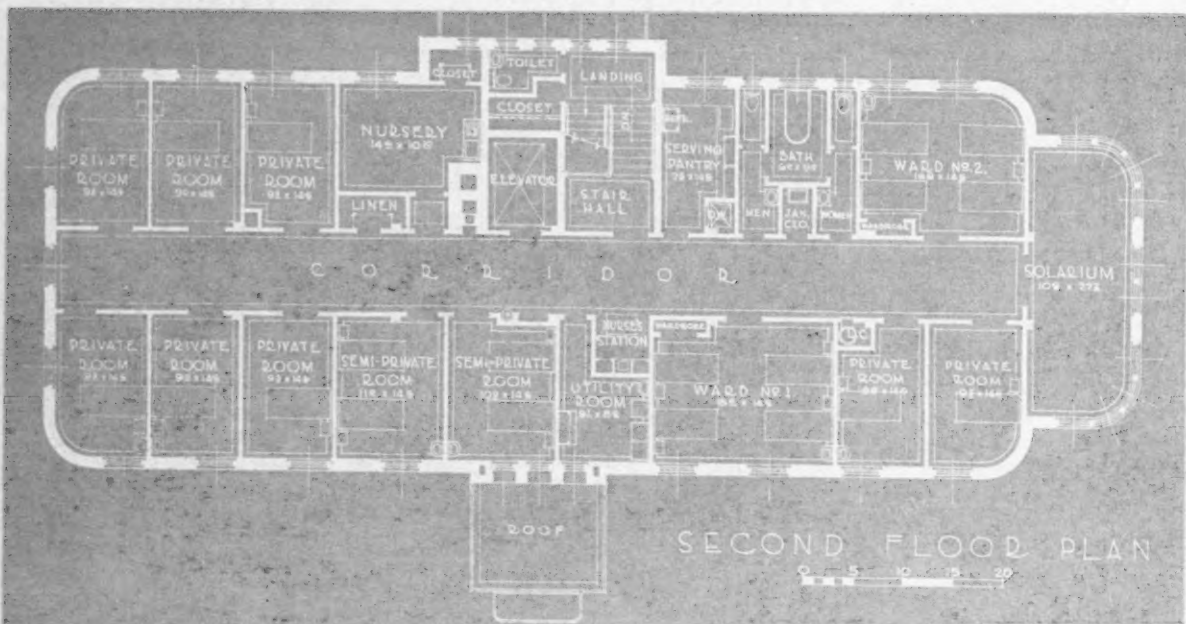
COMMENT: This and the Snyder Hospital bear out the promise so evident in Mr. Boren's plans reviewed in last year's portfolio. His contributions to good hospital plan-

ning have been abruptly cut short by an airplane accident.

With such an illustration as this to study, poverty-stricken, indeed, is the community that needs a hospital and cannot provide it.

The x-ray room seems small; it could well have been combined with the adjoining treatment room. Both an operating room and a delivery room are provided; wouldn't one general purpose room be sufficient? Space thus released might have provided light to the utility room; a window in the corridor, and a janitor's closet.







TINSLEY MCBROOM & HIGGINS
ARCHITECTS

IOWA FALLS MUNICIPAL HOSPITAL

LOUIS L. KLIPPEL
ASSOCIATED

Municipal Hospital, Iowa Falls, Iowa

Tinsley, McBroom & Higgins, Des Moines, Architects; Louis L. Klippel, Iowa Falls, Associated

THIS hospital, built to serve a city of 4,500, has a normal capacity of twenty-five adults and eight infants, but can be made to accommodate eight more adult patients. Its cost, including architects' fees and fixed equipment, will be \$75,585, or fifty cents per cubic foot. Movable equipment will be \$15,000 more and the total cost per bed \$3,623. The land belongs to the city. It is scheduled to open in the fall of 1936.

Of fireproof construction, the building will have radio in all wards and rooms. Sound absorbing material is to cover the ceilings of the delivery room and the nursery. The nurse call system is designed to permit the patient to describe his wants to the nurse at her station. Intercommunicating telephones, electric sterilizers and an electric dumb-waiter will aid efficient operation.

COMMENT: An excellent plan of the multistoried type. It is interesting to compare this one with that of the Zurbrugg Hospital. In principle, we believe that the operating department on the first floor is probably better located than one on the second as at the Zurbrugg.

The control of the entrance lounge possible from the nurses' station on the first floor is a detail that would be appreciated in many small hospitals. The amount of service space assigned to the five private rooms on the first floor seems excessive—wouldn't it have been possible to squeeze in another room in that area? Certainly the solarium space on this floor is much too large. If the corridor had been widened and continued through—a tiny, but still sufficient—lounge space or solarium would have been created and enough room left for two additional private rooms.

The operating department is well arranged—the room so carefully labeled "delivery room" will no doubt in

emergencies become the spare operating room. There are some who would criticize the proximity of the delivery room to the operating room. No matter how valid such comments may be in larger hospitals, it does not bear calm and disinterested analysis for small hospitals with limited funds. Might it not have been better to plan the sterile supply room at the end of the building, build in the sterilizers, and thus provide one large nurses' workroom?

As we see no other nurses' coat room, presumably the nurses' dressing room in the operating department is intended for the entire staff—wouldn't it be better located elsewhere, in the basement, for example?

A surgeons' dressing room adjoins the operating room and is, contrary to usual practice in the small hospital, of a usable size. But no doctors' coat room is shown anywhere. The usual depository, where none is provided, is an untidy coat rack in the hall or the superintendent's office—which is the worse?

The architects are to be congratulated on their kitchen plan. It isn't a 300-bed hospital kitchen shrunk until it fits nowhere but is one cut to size—25 beds. What is the purpose of the vault adjoining?

It is difficult to understand the purpose of the suite in the basement—consisting of living and bed room and toilet. Can it be that it is intended for the superintendent?

The emergency room is ubiquitous in these small hospitals. As we can't eliminate them from the plan and we can't afford to operate them, there isn't much we can do about it except use them as storerooms—badly needed here as is usual in these hospitals that put all their medical services in the basement.



The Zurbrugg Hospital, Riverside, N. J.

Morris & Erskine, Philadelphia, Architects

THIS hospital, with a normal bed capacity of forty-two, excepting bassinets, was constructed to serve a manufacturing community of 6,000. Building and fixed equipment cost \$182,000, or \$0.617 per cubic foot.

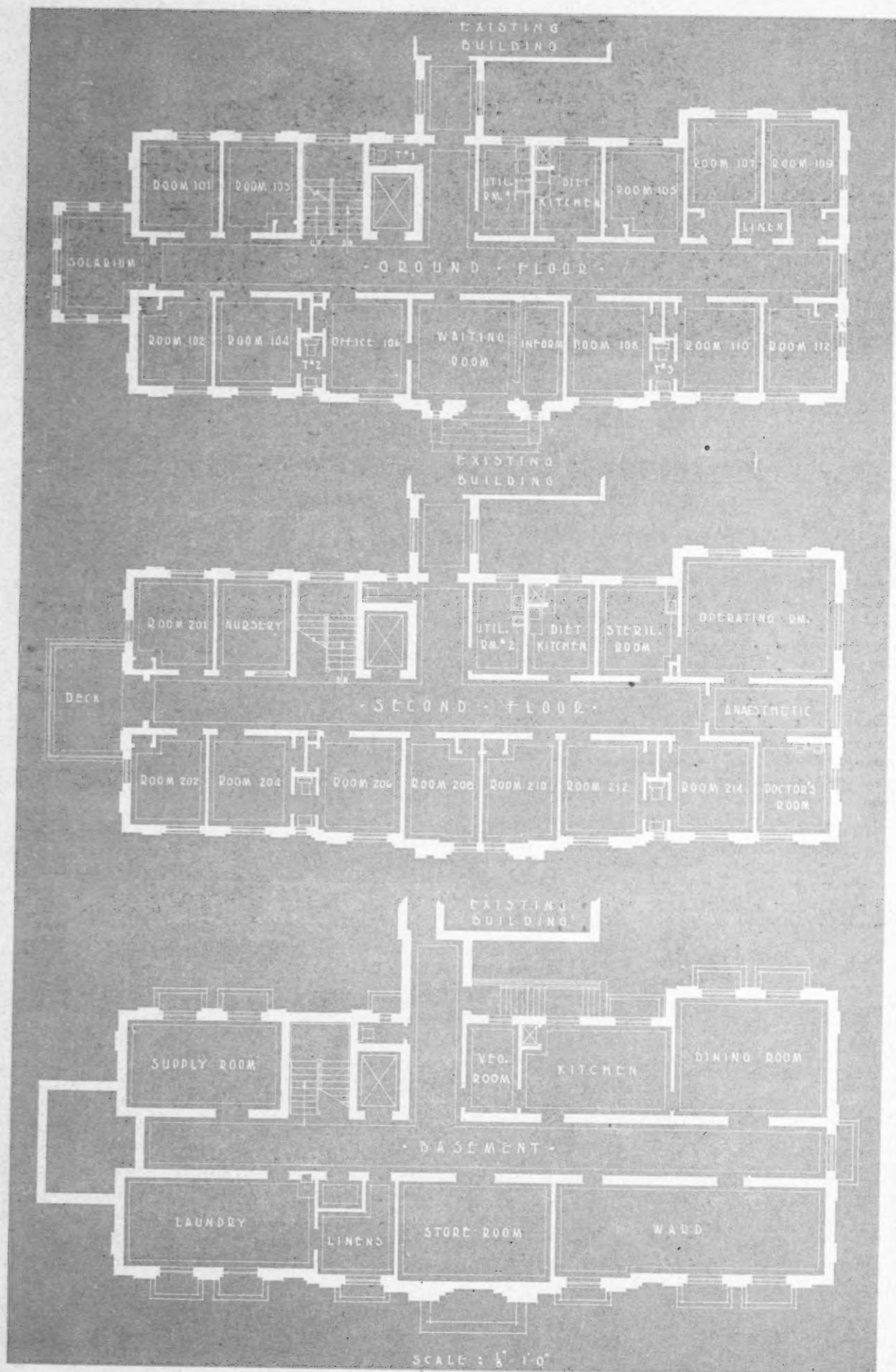
Walls of the building are of a local red brick with occasional inserts of colored glaze tile; terra cotta and limestone have been used for sills and other trim. All floors and partitions are of fireproof construction, cement floors in the corridors being covered with rubber and in private rooms and wards with mastic tile. Kitchen floors are red quarry tile; service rooms have terrazzo.

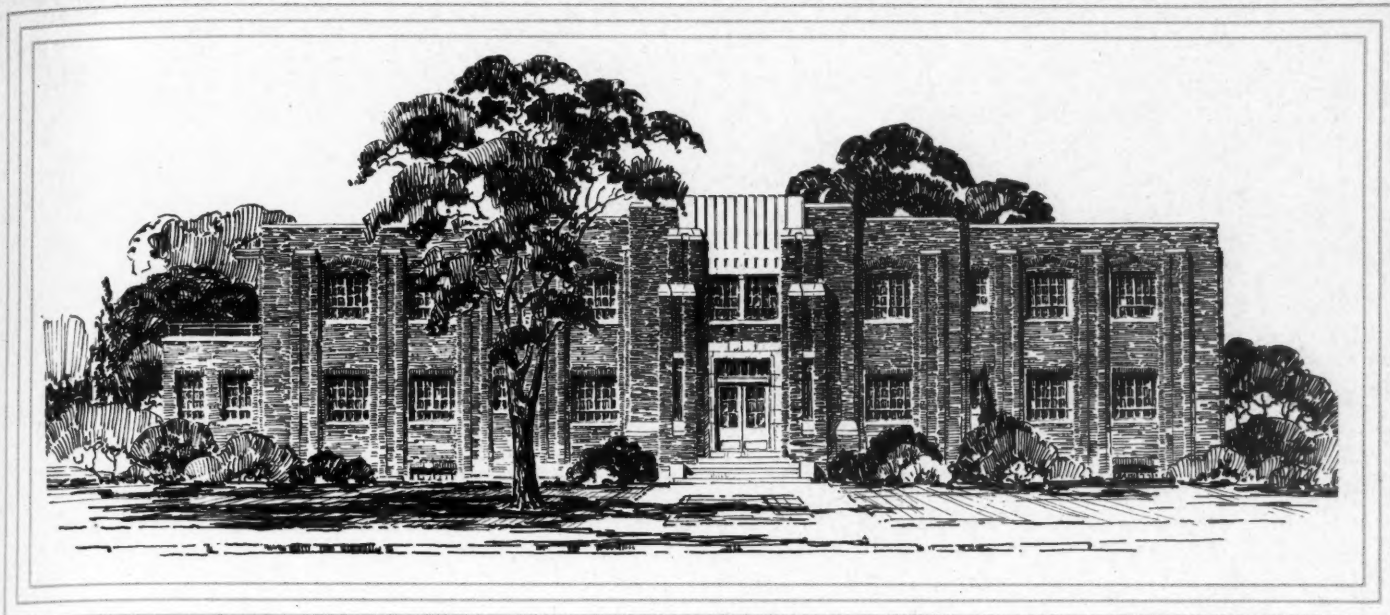
Sound absorbing material covers ceilings of the cor-

ridors, and the delivery rooms have been encased in acoustical felt. The temperature of the individual rooms may be adjusted by thermostat to suit the occupants. Interior finishes and furnishings have received particular attention. Laundry and garage are housed separately.

COMMENT: An excellent plan of the multistoried type. Its forty-two patients are distributed on two floors. We must confess to some doubts about the four, five and six-bed wards. Judging from the drawings they are probably not more than three, four and five-bed respectively, if 80 square feet per bed, a none too liberal but generally accepted standard for hospitals, is used.







New Woodlawn Hospital, Rochester, Ind.

LeRoy Bradley, Fort Wayne, Architect

ON January 5, 1936, Woodlawn Hospital opened this addition with twenty-six beds and six bassinets, increasing its total capacity to forty-seven. The new building, including fixed equipment and architect's fees, cost \$32,549, movable equipment \$4,500 and land \$5,000. The cost per bed was \$1,157, and the cost per cubic foot \$0.34, excluding land and equipment in both cases.

The building is of fireproof construction, with sound-proofing in corridors and elevator. Radio is provided in the twelve private rooms.

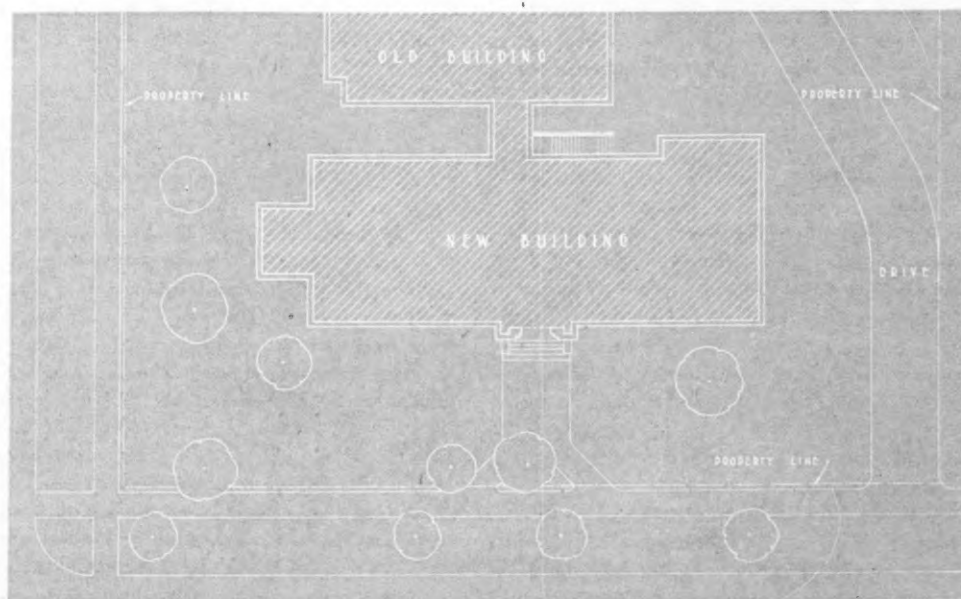
COMMENT: This otherwise excellent building in its attractive presentation has one feature that we cannot approve: If you will look at the lower righthand corner of the basement plan, you will find a large space marked "Ward," apparently intended for eight patients. Then, glance at the perspective drawing, righthand corner of the building—the tops of the windows for this ward are barely above grade. Patients in cellars!

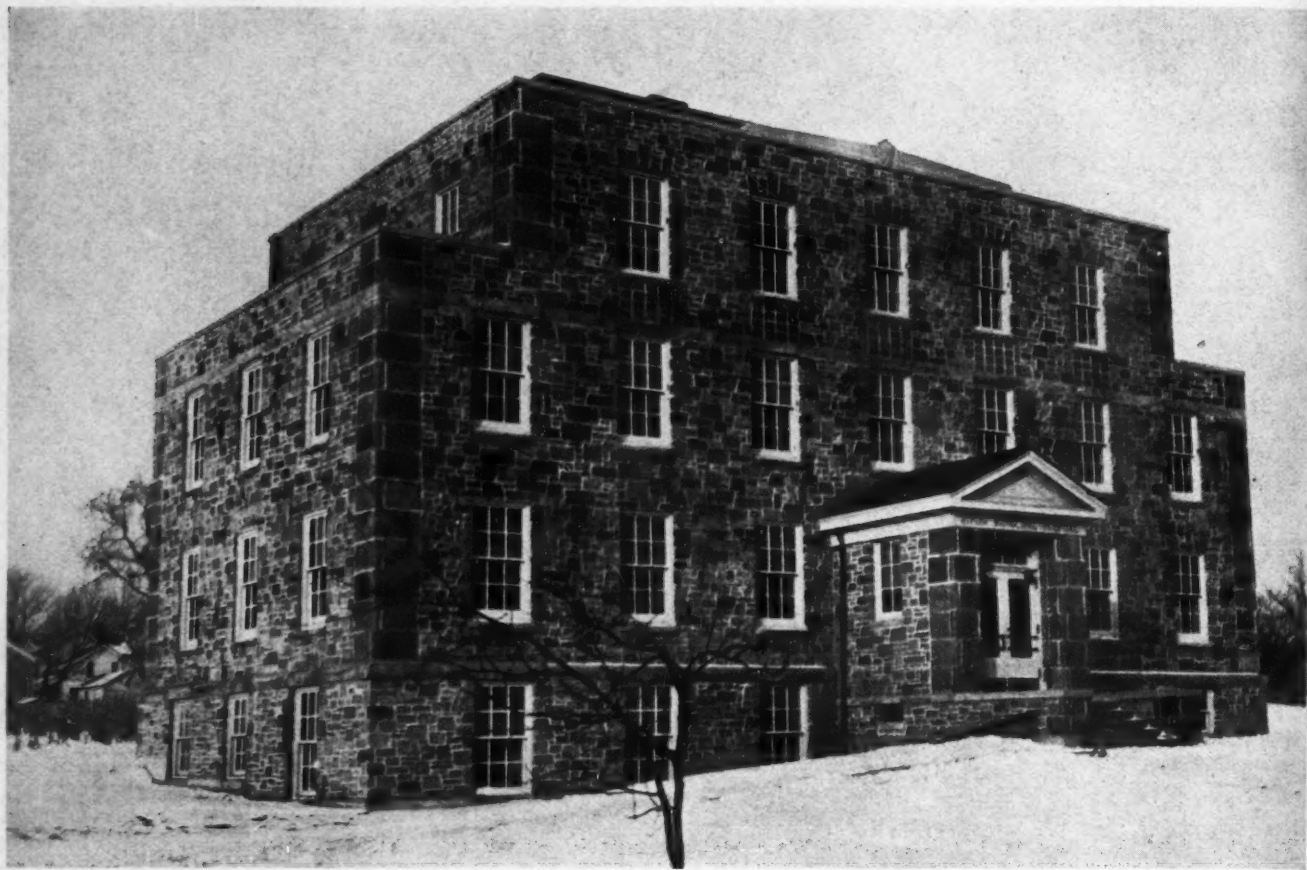
However, we need not worry about it for if the doctors

permit its use (and we doubt it)—the patients of Rochester won't. Then, too, we doubt that an eight-bed ward is of much value in a hospital of this size in the typical Indiana community such as we assume Rochester to be.

The figures at the head of this article should be corrected accordingly. Correction too should be made to eliminate the bassinets in the nursery. Plans show Room 103 containing one bed to be exactly the same size as the nursery containing six bassinets. Without the bassinets and the subterranean ward the capacity of this addition is 18 instead of 32—a reduction of 40 per cent. The cost for each of these 18 beds is \$1,808—just about 70 per cent more than the quoted cost of \$1,157.

This building does not contain x-ray, laboratory or boiler room, which are presumably housed in the older building. There are many who might lift an eyebrow about the one operating room in this building. They would certainly lift the other eyebrow if told that there was another operating room in the other building.





Ripon Municipal Hospital, Ripon, Wis.

Edgar A. Stubenrauch, Sheboygan, Architect

EIGHTEEN beds is the present capacity of this hospital, three of the rooms accommodating two beds each. The latest report available on cost is that building and equipment will exceed \$80,000, part at least of which is PWA money.

Walls and floors are of reenforced concrete, interior partitions of cinder block for its insulating and sound-proofing qualities (the nursery is also treated with sound-proofing material). Facing of exterior is locally quarried limestone, carefully selected for its pinkish color. All floors are terrazzo, the corridors having linoleum runners imbedded.

Furnishings in the rooms are chosen to match the varied wall colors, and upper and lower ventilators in the doors make for thorough ventilation and privacy.

Electric equipment includes doctors' registry with indicator in main corridor and office, nurses' call system, night lights, electric clocks with master control, signals in office for drug cabinets, and electric stop clock for operating room.

A water softener, gas incinerator and automatic stoker are part of the boiler room equipment. The x-ray room is equipped for x-ray and fluoroscopy in both horizontal and vertical positions, and with stereoscopes, viewing boxes and other equipment. Films are to be stored in a special compartment in the elevator penthouse.

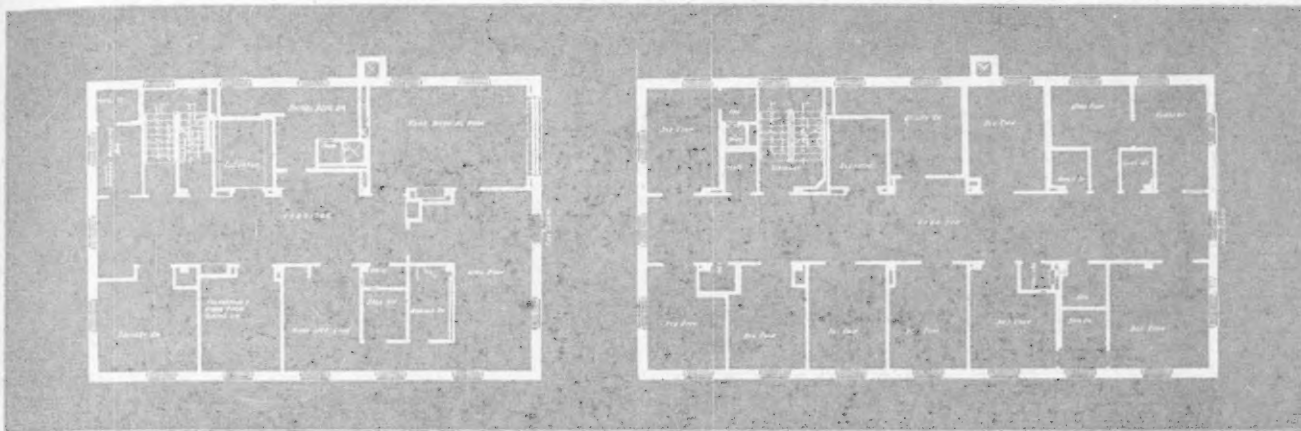
A heated tray truck has been provided to carry food from the kitchen to the patients. The plan includes a fully equipped laundry.

COMMENT: The PWA has this minor but very important achievement to its credit. It has made many a community conscious of its own resources—turned its vision from the distant scene to the close-up of itself. The emphasis on work in the community benefited by a building loan and on man hours of labor has caused many a community to canvass its own resources. One of the by-products of this searching has been the rediscovery of many excellent local stones, tested by years of exposure in the older building but rejected in recent years by the glitter of face brick and stone from distant points.

This area of Wisconsin has been slowly becoming conscious of the beauty of its native stone. And doesn't this very lovely building demonstrate its worth? Simple—ne'er a frill—but sturdy and pleasing. It looks like a hospital in which you could put your confidence, doesn't it?

Granted that a three-story building must be built, this is about as well as can be done in its planning. The third floor operating department is very large for this hospital's eighteen beds, though this may be justified if a marked increase in the capacity may be reasonably expected in the near future. The difficulties of properly nursing a patient in the delivery and labor room on the third floor where there are no other patients will be obvious. The curious combination of preparation, labor and plaster in one room is an experiment worth watching.

In the basement we find the ever present emergency operating room which will probably one day (if it hasn't already) supplement the inadequate storeroom space.



Left, third floor plan, right, second floor plan.

Whether a laundry can be economically operated in a hospital of this size is questionable, but there will be no difficulty in finding other uses for this space.

But we would especially call attention to the first and second floors of this building to illustrate the inherent difficulties of planning small multistoried hospitals.

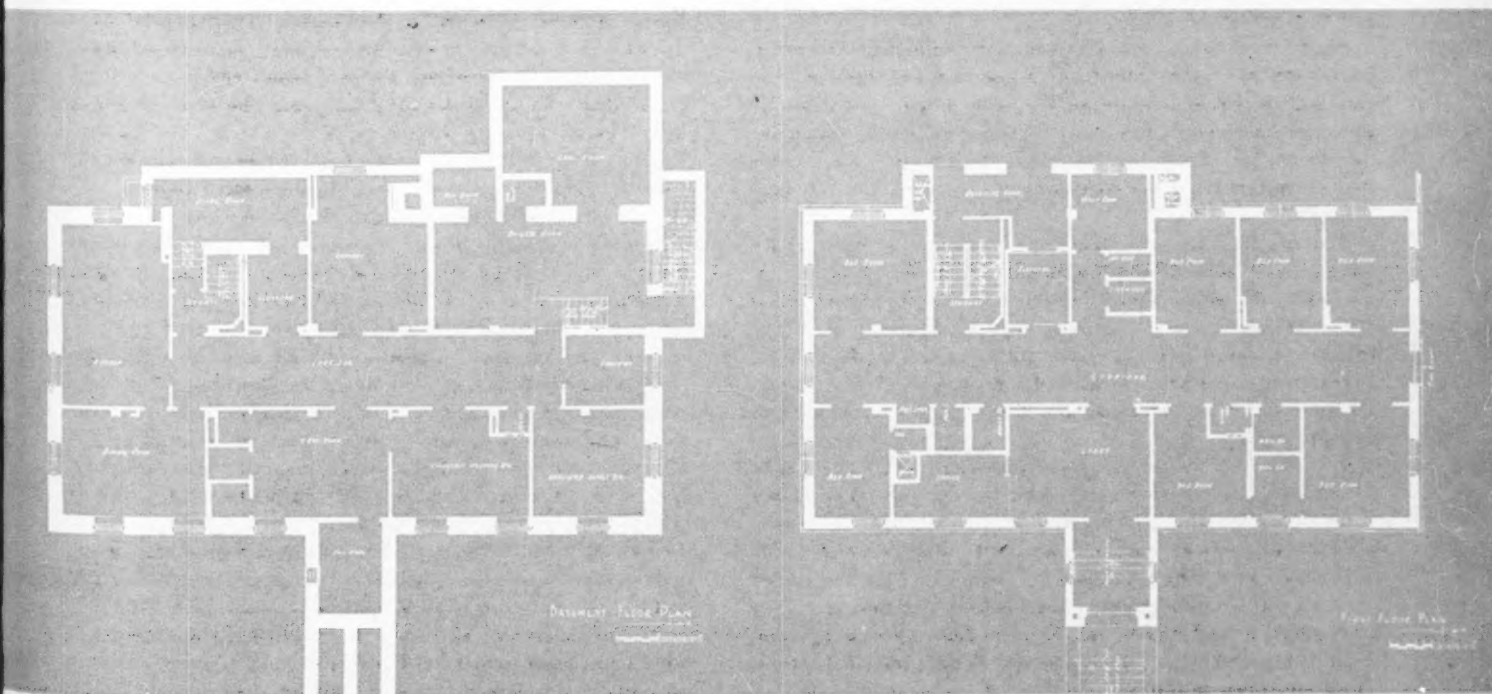
For the eighteen beds on these two floors there are provided two utility rooms, two janitor's closets, two linen closets, two bathrooms, two men's toilets, two women's toilets, two elevator shafts, two stairways and two sets of corridors adjacent to these areas. If the eighteen beds were all on one floor only one of most of these services would be necessary with resulting economies in construction. The elevator and stair hall would not be a whit larger if it served eighteen patients on one floor instead of nine on each of two floors; the utility room would be no larger nor need it have any more plumbing fixtures. One janitor's closet would suffice. The single linen closet might be larger. And so might the toilets and bathrooms. If the patients were all on one floor, it is safe to assume that the area necessary for services would not exceed more than 60 per cent.

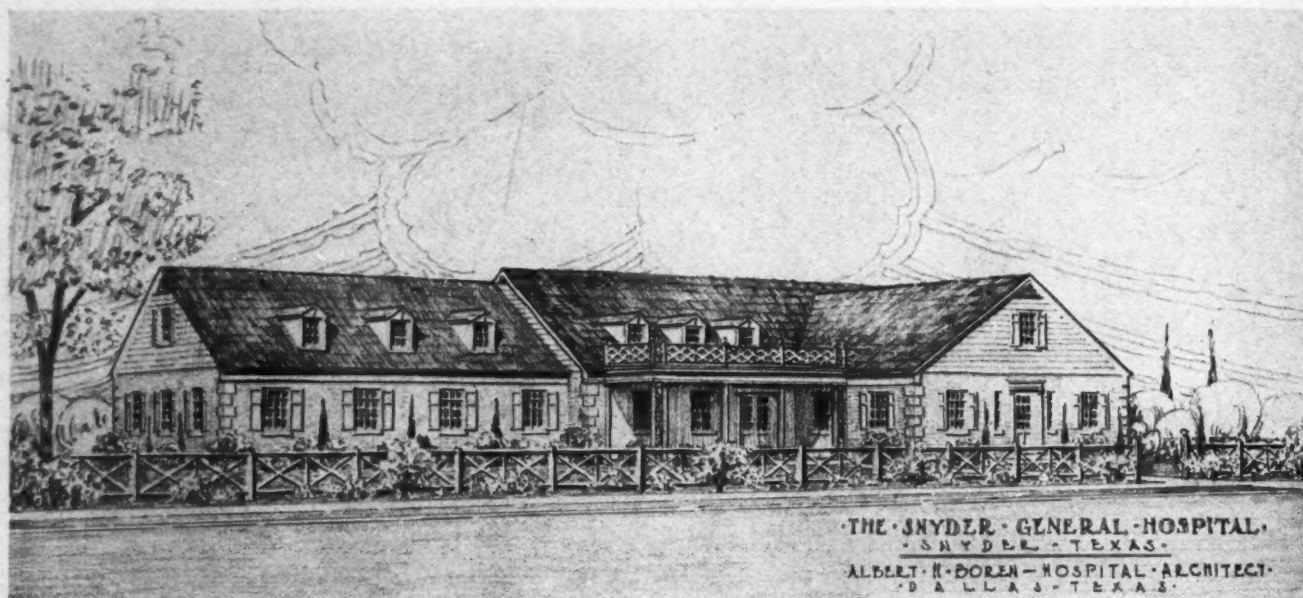
But such economies in construction costs must be considered in relationship to operating costs and quality of

service. For years the greater efficiency of the many storied hospitals as distinguished from the lower hospital has been advocated but it never had any application to the hospital of less than twenty-five beds. Twenty-five beds makes a comfortably sized nursing unit. To divide it into two floors not only multiplies accessory rooms but increases nursing labor.

It is to be remembered that elevators in these small hospitals are slow and expensive to operate; stairs are quicker but more laborious. We never have seen any figures but probably an 11-foot rise from floor to floor via stairway is the equivalent of a 100-foot walk on the level at the beginning of the day. At the end of a hard day it probably equals about a mile. And then consider the difficulties of ensuring adequate nursing service to twelve patients requiring use of two floors of such a building as this. Plan it for twenty-four hours and make sure that nursing service is available at all times.

Both building and operating costs point quite clearly to the building of one patients' floor for hospitals of forty beds and under in areas with inexpensive ground. This is subject to many variations. It might be one story with only boiler room and storerooms in the basement; or the medical services might be placed on a second floor.





Snyder General Hospital, Snyder, Tex.

Albert H. Boren, Dallas, Architect

BED capacity, 12; cost, \$18,000. Cost per bed, \$1,500 exclusive of land and equipment. Fireproof construction up to ceiling.

Exterior walls of 8-inch hollow tile veneered with white face brick. Roof and shutters are deep green and the large porch has a red quarry tile floor. Heating plant and storage space are in the basement.

The general examining room is for use of all of the physicians; the chief surgeon has his office here.

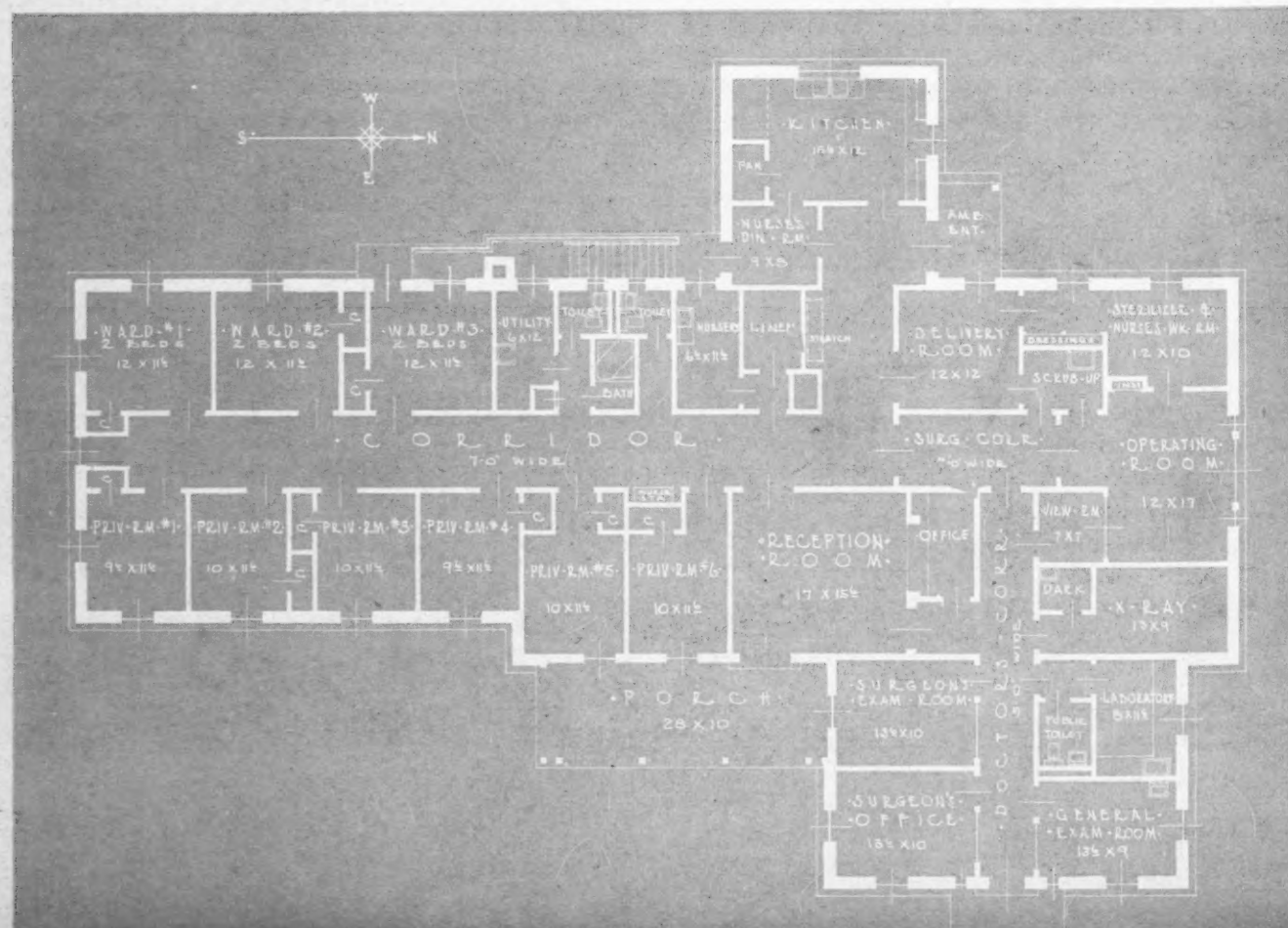
Funds were obtained by sale of stock to the community.

COMMENT: An excellent plan, an attractive exterior,

and a very low cost. There is good segregation of in-patients, out-patients, visitors and services, and their relationship to one another could hardly be improved. Closets are provided for each patient's room.

The operating room has been reduced to 12 by 17 feet, an area too small for satisfactory technique. Apparently this was done to permit the installation of a gallery for relatives to watch operations.

The door to the outside in one of the rooms to permit complete isolation is an excellent idea for hospitals that cannot, we presume, dodge the care of infections.



Is Any Hospital Building Fireproof?

By V. L. DOUTHIT

Fire Protection Engineer, Chicago

ALL of us, particularly those of us in the business of analyzing fire hazards, are wont to talk glibly of fireproof and non-fireproof buildings, as though one could point his finger at one building and say, "That building cannot burn," and then, pointing to another, "This one can, and very likely will."

If buildings could be thus definitely classified the problem of the insurance underwriter would be immeasurably simplified. We know, on the other hand, that no building is fireproof—that there is no building that cannot be damaged by a fire within it or even adjoining it on the outside. That a single brick or a slab of concrete will not burn is granted, but a brick wall or a suspended concrete floor may be utterly ruined by intense heat. Let us understand, then, that the term "fireproof" is comparative—that a "fireproof" building is one less subject to damage by fire than a building of more readily combustible or damageable construction. Many persons for this reason prefer the term "fire resistive."

Now, all this is stated not in an effort to discourage the use of fireproof construction in the erection of hospital buildings, or in any way to discredit the effectiveness of buildings of good substantial concrete, steel and masonry (fireproof) construction in withstanding and retarding fire. Indeed, we find quite the opposite to be true. Exhaustive tests in Underwriters' Laboratories—that extensive nonprofit testing station sponsored by stock fire insurance companies for determining the fire-resistive qualities of building materials and the efficiency of fire protection appliances—and records of past fires show conclusively that buildings of fireproof construction are far less subject to severe damage by fire than are those of more combustible construction, and that, what is probably more important, fireproof buildings are equally superior in the safeguarding of life.

This fact is evident, then—that

hospital buildings should be of fireproof construction; but many are not. And in those that are, much can be done to decrease the hazard of fire. Although there is a tendency toward increase in building construction, most hospitals at present are not concerned about erecting new buildings. To those that are, certainly nothing but the soundest fireproof construction is recommended. But what may be done toward eliminating hazards and safeguarding life in hospitals already built and perhaps long in use? This is the problem with which we are concerned—the responsibility with which we are charged.

Hospitals of the fireproof class may be passed over rather briefly, because in the nature of their construction many of the ordinary fire hazards have been eliminated. In general, however, such buildings should be separated by standard fire walls or by at least 50 feet of open space. Floors of adjoining buildings, if connected, should be connected by fireproof corridors with standard automatic closing fire doors on the openings or by openings through fire walls protected by automatic closing fire wall doors.

While one-story and two-story buildings are

A FREE SERVICE

Arrangements have been made with the fire protection engineers of the various state rating and inspection bureaus and the leading companies for a free inspection service for hospitals. These engineers will gladly survey your hospital property to suggest methods of safeguarding lives, protecting property and eliminating fire hazards, or to provide information relative to insurance forms, costs or other factors necessary in analyzing your particular protection and insurance problems. No obligation or cost of any kind is involved. Write The MODERN HOSPITAL.

feasible in smaller communities, the relatively higher value of land in large cities necessitates the building of considerably higher hospitals. In those latter cases helpless patients should be placed as near the ground as possible. Furniture and equipment should, whenever possible, be incombustible, and combustible and highly volatile articles should be kept at a minimum.

Safety More Apparent Than Real

It is a common fallacy to assume that because a building has brick or stone walls it is relatively safe. Many hospital buildings are of highly combustible construction, containing large areas with absolutely no provision for checking the spread of smoke and fire, which can communicate from floor to floor through open stairways, elevator shafts, chutes and other such openings. The ordinary hospital building of wood joist construction is a potential furnace, with masses of wood, dry as tinder, enclosed in oven-like walls. The speed with which fire spreads through such a building is appalling. The spaces between the studding in the partition walls are frequently entirely open from the basement to the attic, and within a few minutes after a basement fire is started, the attic becomes a mass of flames and the building is doomed. Brick or stone walls add little or nothing to the safety of a building if it has a wooden interior. Since approximately 75 per cent of hospital buildings are of frame or wood joist construction, the need for improvement is certainly apparent.

Only through radical changes in the structure or by the installation of automatic sprinklers can such conditions be appreciably improved. For the proper installation of a system of automatic sprinklers in a particular hospital specific plans must be prepared to fit the conditions found and little can be said here in a general way.

Much improvement may be secured, however, through structural changes in nonfireproof buildings. Several improvements of this type are:

1. The enclosure of all openings between floors, such as stairways, elevator shafts, dumb-waiters, chutes and the like, with fire-resistive partitions and doors.
2. The subdivision of buildings by means of standard fire walls, or partitions.
3. The elimination of wood shingle roofs.
4. Construction of fire-resistive floors, walls and ceilings about heating apparatus.
5. The protection of the entire basement ceiling by metal lath and plaster.

Since fire ordinarily spreads much more rapidly vertically than horizontally, it is important that no open paths between floors, such as open stairways and open elevator shafts, are provided.

Stairways should be enclosed in strong partitions, preferably of incombustible material, with self-closing fire doors, but good double board partitions and doors are suitable for many situations. Such enclosures should be liberal in size, well lighted both with outside windows and artificially, with wide hallways to permit occupants of upper stories to pass out while being protected from a fire that may occur in a lower story.

Elevators should be similarly closed unless they are in brick shafts. Elevator shafts should extend through the roof, in no event opening into the roof space. Openings may be provided above the roof of the hospital in elevator roof houses for ventilation. Doors on both elevators and stairway shaft openings should operate automatically.

Fire walls prevent the spread of fire horizontally, and in order to confine a fire as much as possible, every advantage should be taken of existing walls to make them effective for that purpose. In order to accomplish this, unnecessary openings may be bricked up; walls may be carried through the attic and roof; timbers which originally passed through the walls may be cut off so as not to create continuous combustible channels through the walls, and of course on all of the necessary openings through such walls remaining, approved automatic closing fire wall doors should be provided.

With the great variety of such doors being manufactured today, no difficulty would be encountered in properly closing any such opening, provided it is not unusually large. All fire doors which have been built according to standards sufficiently high to meet the requirements of fire insurance rating and other underwriting authorities will bear a label of approval of the Underwriters' Laboratories.

In some hospitals of this type having large areas with no existing interior masonry walls, the only effective improvement of this nature would be the erection of one or more standard fire walls across the building.

Eliminate Wood Shingle Roofs

The chief objection to a wood shingle roof is its susceptibility to catching fire from a fire occurring in a building exposing a hospital building. Such roofs also, of course, frequently catch fire from sparks coming from the chimney of the hospital itself. With the wide variety of fire-resistive roofing materials now available, no material replacement of a roof should be made with wood shingle. The wood shingle is notorious in the spread of conflagrations; it furnishes not only the fire brand that spreads from building to building, but also the tinder which it ignites.

Heating boilers should, whenever possible, be located in fireproof rooms, if not in detached buildings. Openings into such fireproof boiler rooms should be protected by automatic-closing fire wall doors.

Flues and ducts of heating and ventilating systems serve also as ducts for the rapid spread of fire, and they should always be constructed of metal or other noncombustible material. These ducts should never terminate in an open space between the ceiling of the top floor and the roof, for in such cases fires are drawn directly to that area, where it is difficult to extinguish them. Such ducts should extend entirely through and above the roof.

In congested city districts, or in other cases where the neighboring exposure from other buildings is severe, it is important that the outer wall opening of the building be protected against the

entrance of fire from the burning of a neighboring building. For this purpose standard tin-clad, solid steel, sheet metal or rolling steel fire shutters may be used. For the more moderate exposures, standard wire glass fire windows with all-metal sash, may be used.

It is suggested that in planning any structural changes in hospital buildings the local fire insurance rating organization be consulted, and that the approval of that organization be secured before the work is begun. Such advice will be provided by these organizations without charge, and improvements of this nature, meeting the requirements of these boards, frequently result in reduced fire insurance rates. Although the dominant thought in this article has been the protection of human life, it follows as a matter of course that such improvements are equally valuable in the protection of property.

Surveying the Accomplishments of Volunteers

More and more are volunteers rendering valuable and successful service to hospitals. A satisfactory arrangement of the volunteer service consists of a division of eleven groups, each doing a specific piece of work. The annual report of volunteer service in our hospital reflects the following for the year 1935:

In the surgical dressing group 13 volunteers gave two hours a day each week, with a 90 per cent attendance, making 160,344 dressings. In the gauze cutting group 8 volunteers gave two hours every two weeks, with a 75 per cent attendance, cutting 700 bolts of gauze for surgical dressings. In the library group 14 volunteers, each giving two hours three times a week, carried the full responsibility of distributing books, magazines and newspapers daily to all patients, with a record of 85 per cent attendance. The sewing group, composed of 5 sections of 10 volunteers each, meeting two hours each week for six months, with an average attendance of 90 per cent, made 1,641 linen articles, such as gowns and tray cloths. In the central surgical tray room 1 volunteer gave two hours weekly for one year, with a 90 per cent attendance. Six volunteers worked in the health clinic, one giving two hours two days a week, with a 90 per cent attendance, the 5 other volunteers being a little more irregular in attendance. In the record room 1 volunteer gave two hours one day weekly, with an attendance record of 75 per cent. Altogether, a total of 9,705 hours of service was given, with a record of 85 per cent attendance.

Perhaps the secret of the regularity and interest of these volunteers is due to the four following factors:

1. An orientation course, given under the auspices of the community council, consists of ten lectures, designed to give the volunteer a general picture of the phases of work in which she can participate, and to outline her responsibilities.

2. Through the Central Registration Bureau the volun-

teer can associate herself with the institution in which she wishes to enlist.

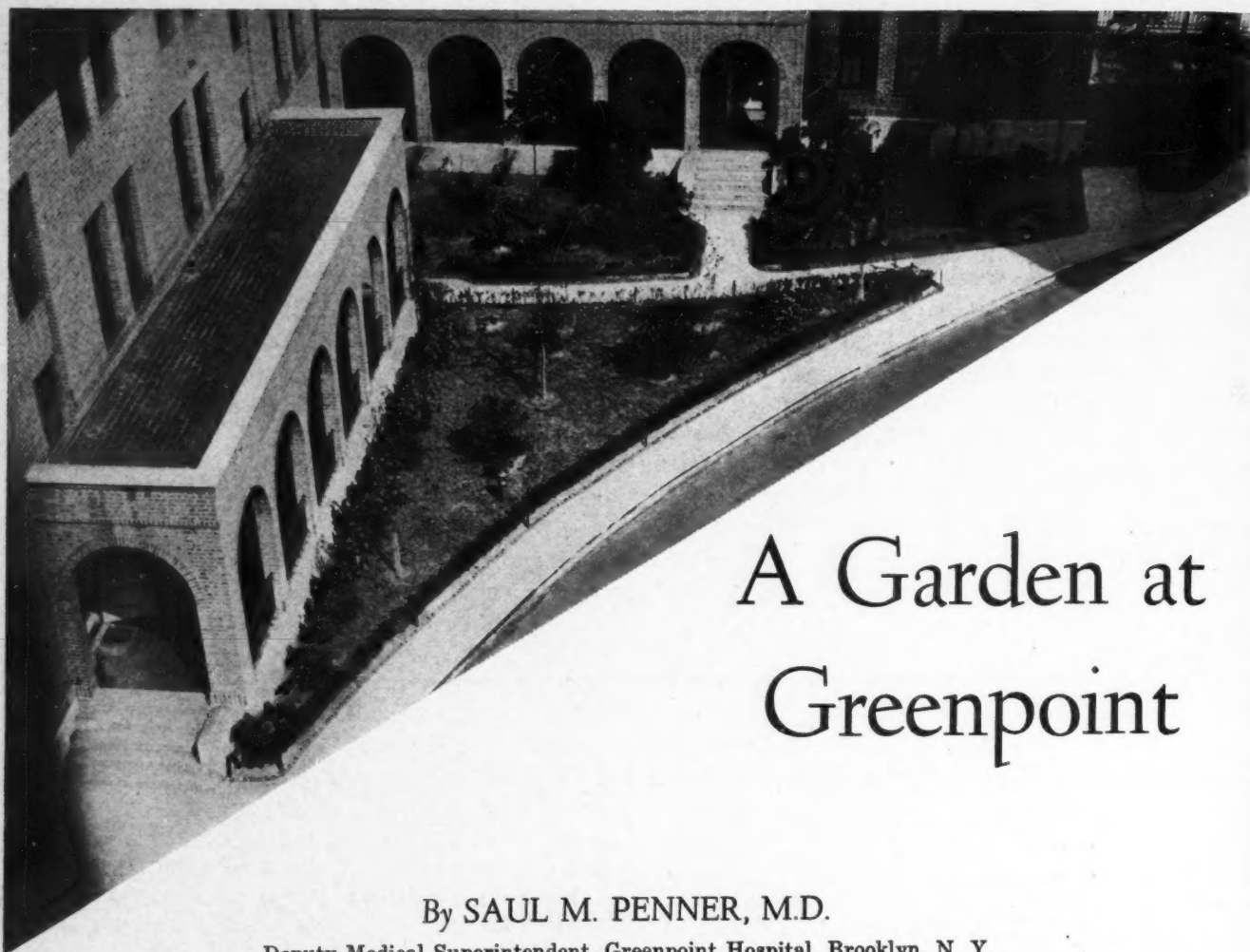
3. Her actual assignment is made by someone in authority in the institution in which she serves, who knows human nature, is willing to discuss the services open for volunteer work and realizes that the average human being must be placed where she will be happy and useful. Older women like to sit and chat while working; younger women must have action. A young woman of twenty-six would not be happy making surgical dressings with a group of women from forty-five to fifty years of age. The volunteer is made to realize the importance of continuous service and not allowed to offer too much time in the beginning as her interest is apt to "peter out." One or two hours a day for one or two days a week constitutes a wise assignment for beginners. The importance of dependability and regularity is explained to the volunteer, since it consumes considerable time of a trained, salaried worker to develop her into a useful worker.

4. A proper and capable volunteer supervisor is placed over each group to direct and stimulate the activities, act in an advisory capacity to the volunteers and serve as a medium between them and the hospital administration.

The volunteer or "unsalaried sister" performs a distinct and definite service as she brings to the institution freshness and interest, broadens its activities and acts as an interpreter of its program to the community. Let's make her work more effective.—*E. Muriel Anscombe, F.A.C.H.A., Jewish Hospital, St. Louis.*

Advantage of Venetian Blinds

Venetian blinds have much to recommend them for hospital use. They replace shades and drapes and for that reason are economical not only in first cost, but in maintenance as well. They are particularly desirable since they exclude direct light and at the same time permit ventilation.



A Garden at Greenpoint

By SAUL M. PENNER, M.D.

Deputy Medical Superintendent, Greenpoint Hospital, Brooklyn, N. Y.

ON ONE extremity of Long Island, N. Y., bounded on the west by the East River and on the north by Nassau Creek, is a district known as Greenpoint. Its population consists essentially of a group of people drawn from every nationality. Although there are a few "white-collar" residents, the majority are members of the Latin, Polish and Russian races who eke out a livelihood as laborers and longshoremen. Their location in Greenpoint confines them within short distances from their places of employment in the various warehouses and factories in that district.

Due to overcrowding, there has been an almost total disregard for the planning of parks and recreation grounds. The inhabitants live from hand to mouth and are without sufficient means to beautify their homes or yards. The mother finds a veritable haven, a real house of refuge, when she enters Greenpoint Hospital for the delivery of her child. The maimed and the sick, and there are many, look forward to proper medical care in this institution, in preference to confinement in their own cold, dismal, poorly ventilated, stove-heated flats.

However, the administrative staff and the medical and nursing staffs of our institution have not contented themselves with offering a bed, board and medical care. They have attempted to make the institution attractive, not alone to visitors, but to the sick poor as well. Under the able guidance of the superintendent, funds were made available for the purchase of shrubbery and plants. Visitors, as well as doctors and nurses, donated hedges, shrubbery and trees. A little nook here, a plot there, an uncultivated tract of earth west of the mortuary have all been transformed to give beauty and to subdue austerity. In the relatively short period of two years, this institution has taken on an entirely different aspect. Although located in one of the poorest and least decorative sections of the city, it has become an attractive center, a veritable garden spot.

On the west side of the main hospital building was an irregularly shaped rectangular area of barren, uncultivated, dreary space, approximately 60 feet long and 10 feet wide. As the rubbish was removed from this area, it was surprising to discover that what had been considered simply a barren and unproductive tract was actually a

breeding place for flies and various types of insects. Stones, rocks, half buried strands of wire, cans and partly covered mounds of ashes and garbage made these grounds an uninhabitable and unhealthful place. Countless discarded tin food containers furnished excellent breeding places for insects as well as disease carrying bacteria. All the filth, garbage and refuse were collected and disposed of through the cooperation of the local division of the street cleaning department.

This was only a preliminary step. The ground, though cleaned and leveled, was certainly not fertile, so a few people in the neighborhood contributed several wagon loads of suitable soil. Taking into consideration the variety of plants and trees that might subsequently be acquired and sown, the productive soil was accordingly made thinner in some places and thicker in others, for some plants are hardier and capable of growing in less fertile ground than others. The ground, therefore, was covered with approximately 6 inches of productive soil, whereas a narrow border was set with twice this amount. The latter provided some means for the various hedges to take root and grow evenly.

Locations for trees and taller plants were given more consideration. Since their roots were larger and longer, a deeper resting place was necessary. Consequently, a hole 15 to 20 inches deep, was dug to permit a layer of soil a foot wide about the roots.

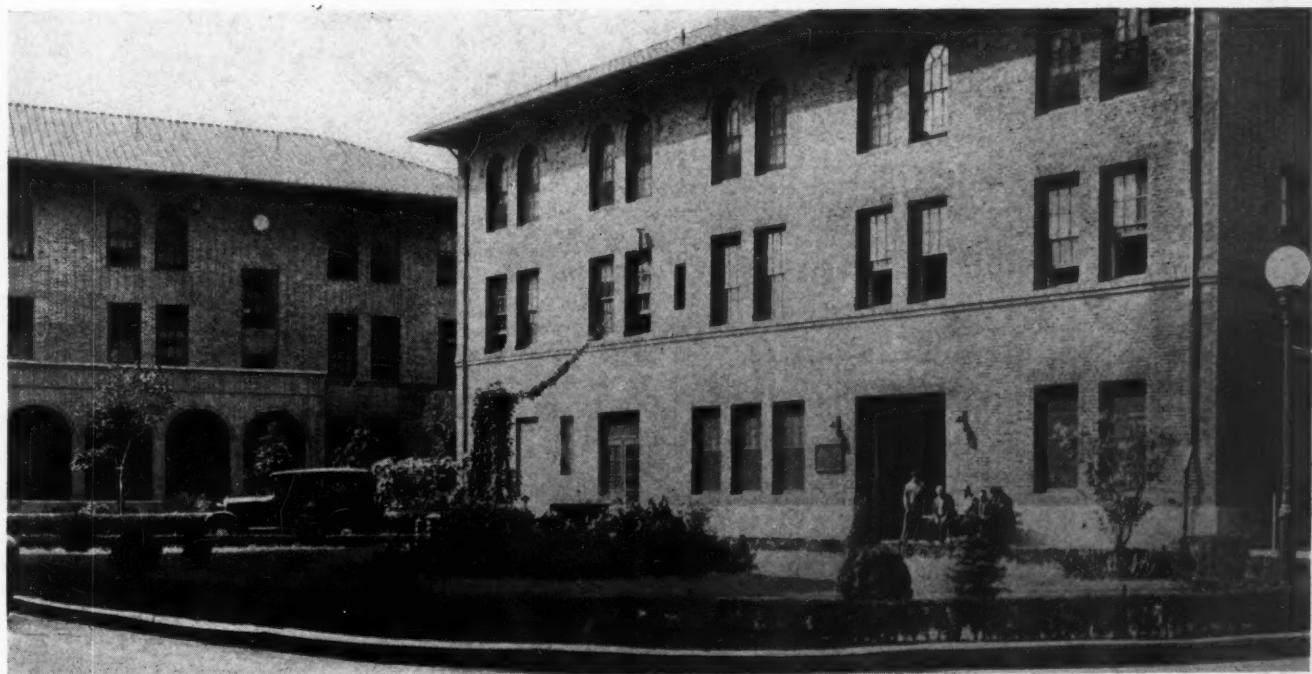
A circular tract of ground, centrally situated, lent itself to more elaborate development. When smooth green grass had been studded with different varieties of small pines and evergreens an old dented and dilapidated fountain was resur-

rected from a neighboring lot. After being repaired by our mechanic and plumber, it was set in the approximate center of the enclosure, and has since been well utilized. The plumber had little difficulty in connecting the water line, and its several coats of white paint over a layer of red lead, formed a contrast with the green that made a colorful landscape for our garden. A revolving sprayer was set upon the top of the fountain, so that it was not only attractive but serviceable as well, for now by a mere turn of a remotely located faucet we are able to spray the grass, plants and shrubs at one and the same time.

Personnel Show Lively Interest

As the grounds became more beautiful, many more of the employees and doctors and nurses displayed a lively interest in the progress of the gardens. They contributed funds and plants and gave their services as well. The plumber, the painter and the mechanic all assisted in cooperating with the chief engineer to help carry out the various plans suggested.

Besides getting the benefit of professional advice from local florists, we also received from them many gifts of trees and shrubs. On their suggestions, we added many physical and chemical materials to the roots of the plants, planted shrubs suitable to each season of the year and trimmed and pruned the trees and hedges. These horticultural additions enhanced the natural beauty of the hospital grounds. The work has become so interesting that it is now one of our hobbies and we are always open for constructive suggestions as to the manner in which we can increase the general beauty of the grounds around the hospital.



What Others Are Doing



*Dionne Quints' Incubator
Draws Record Crowd*

Several thousand persons filed into the Deaconess Hospital, Evansville, Ind., during three days in February, to gaze at a display of incubators. On one side was the modern, electrically run incubator used in the hospital, and on the other was an old-fashioned, hot water heated, wooden incubator—that incubator which was found after frantic search in a Chicago medical supply house and shipped hurriedly to Callendar, Ont., to the Dionne quintuplets.

The exhibit proved most important as a publicity medium. Announcements appeared in the newspapers and were broadcast over the radio. One newspaper included the incubator in a cartoon, another printed its picture. Albert G. Hahn, administrator of the hospital, had invitations printed and sent to churches and civic clubs. A letter went to the superintendent of schools pointing out the educational advantages of the exhibit and asking that pupils be invited to visit it and that a notice be included in the *Public Schools Bulletin*.

The display included, besides the two contrasting incubators, a dupli-

cate of the refrigerator sent to the quintuplets' hospital and made in the town. A nurse was constantly in attendance at the display to explain how the old-fashioned incubator operated and the method of rotating the infants hourly since only three could be placed in the machine at a time, contrasting this with the methods of care for premature infants provided today.

Orange Memorial Talks of Little Things

Having focused the spotlight of public attention upon two of its services—its widely publicized "Guest Suite" and its children's department—Orange Memorial Hospital, Orange, N. J., is now distributing a message concerning its maternity building.

This, too, is in leaflet form letter size appropriately dressed in baby blue and pink. The cover shows the hospital's maternity building and

above it a sketch of a baby with the phrase "Where 'little things' come first." Inside the proper note is struck with a small vignette showing a stork flying over the housetops bound for Orange Memorial, no doubt. On the facing page is the nursery with its rows of immaculate bassinets awaiting the new arrival.

"The old saying that 'Well Begun Is Half Done' applies to nothing more aptly than to the start we get in life," is the way F. Stanley Howe, director, approaches the subject. "At that most important and often critical moment—which no one can escape—much of our future hangs in the balance. . . . It is the privilege of the Orange Memorial Hospital to offer such protection in its special maternity building. This quiet, detached building, accommodating 150 mothers and babies, is separate from other structures housing hospital patients. Only obstetric cases are received there and no nurses employed therein come in contact with other patients."

Incidentally, the hospital is featuring a flat rate of \$110, which includes the care of the mother and baby for thirteen days from admission of the mother to the hospital.

"Where little things come first" is being distributed through the doctors, also in mailings from the hospital office, and visitors find a supply on the table in the waiting room and in the elevators. Another important link in the chain which ties the hospital to the community.

A Giving as Well as Selling Shop

The Little Shop began a year and a half ago as a newspaper and magazine stand run by the women's board of the Millard Fillmore Hospital, Buffalo, N. Y. Today it sells almost everything that patients or visitors are likely to want, from cigarettes and candy to tooth paste or a bonnet for a new baby, and the cart from the shop that goes from floor to floor, propelled by a member of the board, dispenses as part of its regulation stock gracious small services such as mailing letters or making phone calls for patients.

Probably you can think of one or more practical ways to save time or increase efficiency. The Modern Hospital will welcome your ideas to put before other hospitals

The Mental Hospital Educates Its Staff

By FRANKLIN G. EBAUGH, M.D.

Director, University of Colorado Psychopathic Hospital, Denver

THE physician or graduate nurse in an institution caring for mental disorders should look upon each year of service as one of graduate training. The physician should have completed a rotating internship or straight internship of from one to two years before coming to the institution, and, when possible, both should also have a year of special training in psychiatry.

With this preliminary fundamental training, I advise for the physician a period of apprenticeship training, consisting of (1) supervised ward work; (2) out-patient work with emphasis on the study and treatment of the psychoses and early types of mental disorders as well as general follow-up care of patients previously treated in the hospital; (3) work in child psychiatry; (4) opportunity for active participation in community clinic developments and in the educational activities of the hospital; (5) seminars with original papers and critical reviews of the psychiatric literature; (6) independent work on at least one clinical or theoretical research problem; (7) teaching opportunities and close contact with other specialties and departments; (8) abundant opportunities to learn special techniques and examination procedures, such as encephalography, mental measurements, association motor studies, Rorschach test and other procedures.

This training schedule is described as an apprenticeship since it consists of membership on the hospital staff with rotations in the responsibilities of ward or out-patient work as well as work in the laboratory and other special divisions. Assignments to interdepartmental work and to clinics in the community, schools and courts are part of the apprenticeship.

At the beginning of the service, the physician should be thoroughly grounded, under close supervision of the clinical director or senior staff members, in the fundamentals of psychiatric case study. The considerations required in any medical approach are amplified in the psychiatric investigation to include (1) the indirect examination or historical data concerning the chronological evolution of the difficulty as focused in the complaints

The care of mental patients is so highly specialized that it is necessary for the young physician and the graduate nurse to enter a mental hospital with the understanding that they are serving apprenticeships

concerning the past performance and the family tendencies; (2) the direct examination of the mental status and the physical status, which gives a cross section of the present behavior; (3) the contributory information from special examinations and indicated consultations, and the patient's course under observation and treatment.

The complaint is of special importance and should include a verbatim account of the patient's reasons for coming for study as well as those offered by the person directly responsible for the patient's admission to the hospital—father, husband, employer.

The history is best taken in the following order: complaint; present illness; personal history; personality make-up; family history. Guides for the indirect examination and history are available to all staff physicians. Especially valuable is Kirby's guide, recently revised by Cheney.¹

The patient's estimate of himself should be supplemented by the statements of others, and by the data of the past history with regard to intelligence, native drives and special interests, general output of energy with variations and their causes, basic mood with fluctuations and their causal factors, social adaptability with special reference to aggressive and submissive qualities, egocentric features or syntropic tendencies, or special discrepancies and disharmonies. The personality development should be noted, with special reference to the periods of adolescence, adult life and senescence, with special attention to the degree of balance. Succinct illustrative episodes often offer a helpful insight into habitual behavior patterns, and illuminate obscure features in an illness.

Briefly, the direct examination should consist

¹Cheney, Clarence O.: *Outlines for Psychiatric Examination*. New York State Department of Mental Health, Albany, 1934.

of the following: general appearance and behavior; stream of talk and activity; mood; content and special pre-occupations; sensorium and intellectual resources, and insight.

The physical examination must be complete. Experience shows that special attention should be paid to body build (pyknic, athletic, asthenic, dysplastic types); evidence of endocrine dyscrasia, focal infections, the gastro-intestinal function, the genital development and function; the neurologic status, including the autonomic participations in emotional reactions; and the serologic and blood chemistry studies.

Laboratory examinations should include urine, blood count, blood Wassermann and other studies which frequently may be indicated in the examination such as spinal fluid studies, blood chemistry studies, sugar tolerance studies, bromide determinations and basal metabolism rates.

Contributory examinations lead us into highly technical fields, for the most part still problems in research, but often with great practicability. Special mention should be made of the skin resistance, the blood-cerebrospinal fluid barrier index, the Buscaino reaction; the Jung free association test, the Luria motor association test, the Rorschach test, dream analysis, productions under hypnosis, etc. The reader is referred to more comprehensive studies for this material.

There should be eye, ear, throat, nose, sinus, dental, skin, genito-urinary and gynecologic examinations as indicated. There should be no hesitancy in calling for adequate consultation with all of the other fields of medicine.

What Summary Should Include

A complete summary should be made of the direct, indirect and contributory examinations. These summaries constitute an abstract along with detailed progress notes describing the course in the hospital. This complete abstract should close with a formulation.

Complete examinations serve us in several ways. The type of mental disorder, with its direct etiological and chronological development; the possible physical basis for it, and its prognosis or modifiability are determined. From this is derived the therapy. The personality make-up of the patient is ascertained and from this may be judged what he should be like when he is at his best. A cross section of the case at a given moment is obtained which serves as a basis for comparison later so that progression or regression of the disease can be followed from time to time and a longitudinal picture of the illness can be had in concrete facts accessible to all observers alike.

The staff physician should assume active re-

sponsibility for the patients on each ward. This includes careful administration of indicated hydrotherapy, occupational therapy, packs, regulation of the general nursing care, and intensive psychotherapy of both direct and indirect types. The real basis for the direct psychotherapy is the rapport which the physician can readily establish by the thoroughness of his examinations previously described and the confidence derived from kindness, sympathy, understanding, a sense of purpose and a willingness to spend time listening to the patient.

Doctor and Nurse Mutually Helpful

The ward work of the physician should be closely correlated with the work of the nurses. The daily notes from the nurses' chart, behavior chart, the sleeping chart, and the nursing record should be closely watched. The nurses' professional training is furthered by contacts with the staff physician in the daily conferences concerning the changes in behavior noted in each patient. The wise apprentice spends most of his time on the wards and is well paid for the careful records he keeps by the knowledge and insight gained in the study of each patient under his care.

Staff rounds and ward conferences with senior members of the staff at frequent intervals serve to guide the work, give new viewpoints and clarify difficult situations.

Following the period of training on the ward, out-patient responsibilities should be given to the staff physician. In many institutions at the present time there is a trend toward adopting an appointment system in the out-patient clinic and assigning staff members to full-time duty. This seems to me to be desirable. Here the physician assumes responsibility for an interesting group of patients and sees many psychoneurotic reactions which he has not previously contacted in his ward experience. He is given abundant opportunity for psychotherapy and for learning special techniques and aids in complete case study. In the out-patient clinic, he will see many examples of early schizophrenic reactions, many difficult social problems and will be able to observe patients previously treated in the hospital.

There should be abundant opportunity in the out-patient clinic for studying all types of emotional and personality disorders of children. Here the physician has an ideal opportunity to keep pace with modern developments in the field of clinical psychiatry where child and social psychiatry are rapidly becoming most important divisions.

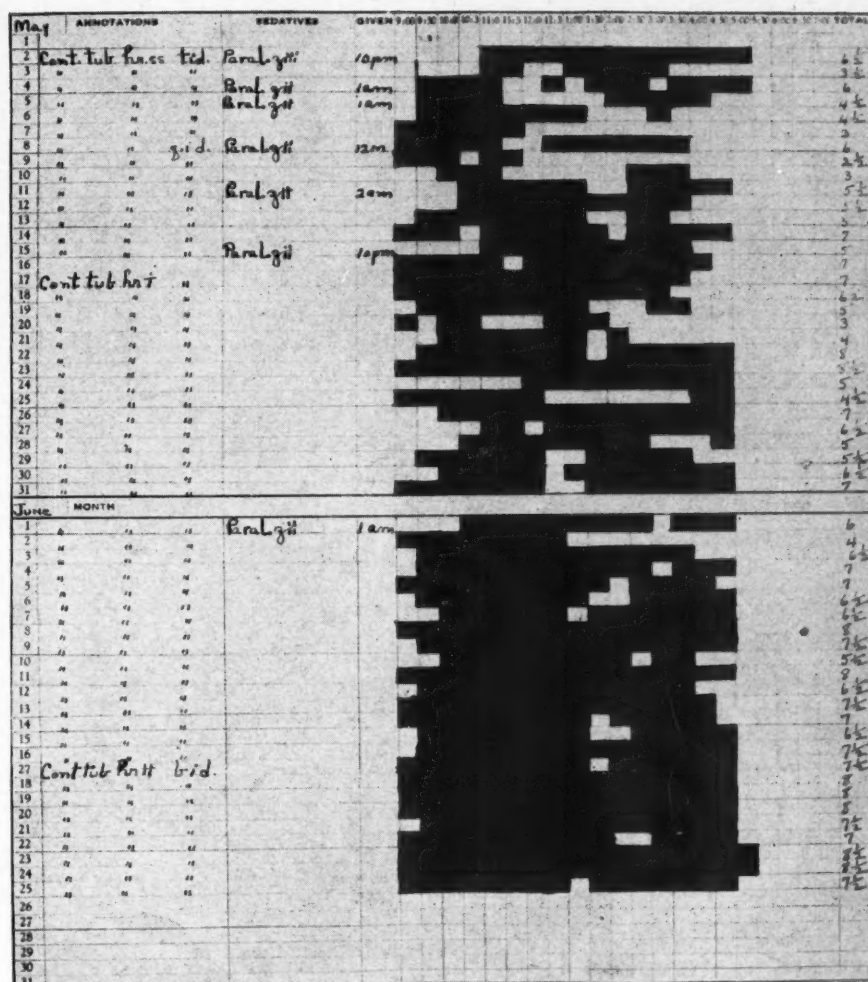
All progressive state hospitals are reaching out into the community and carrying on an active

educational and clinical program. This means the development of a traveling clinic or the establishment of a community clinic service, in which arrangements are made to study mental disorders in the actual setting in which they have originated. The educational and clinical value of these cannot be overestimated. Such community clinics may be held at weekly or monthly intervals, preferably in conjunction with the county medical society.

In seminar discussions, research work should be critically reviewed along with formulations concerning treatment procedures. From time to time original papers should be presented covering special studies made by each staff member based on his own interests and initiative. It is of course obligatory that the institution provide complete library facilities for the hospital staff, consisting of complete files and bound copies of all current magazines.

Research is a greatly abused word but there is more psychiatric research being done at the present time than may appear evident in the general psychiatric literature. The best approach to research by staff physicians is a fundamental training in case study and analysis. There is abundant material for clinical research in each institution as well as opportunities for investigation in psychopathology, neuropathology, neurophysiology and biochemistry. There should be a close correlation with other specialties concerning the advances in these fields and their utilization for the benefit of the mental patient.

The training schedule outlined should cover a period of at least three years. The divisions will vary from institution to institution with the main nucleus for such training centering around the work on the wards and increasing responsibilities for the care of the patient, with later out-patient work and, during the third year, assignments to a community clinic. Attitudes of investigation should be fostered during each year of training and it should be made obligatory that physicians completing an apprenticeship training of three years should meet the requirements and take



This graph shows the gradual improvement in sleep in a manic reaction during seven weeks' hospitalization. It will be noticed that after the first two weeks no sedatives were given, but that during the entire course of the patient's hospitalization he received continuous tubs three times a day. The sleep during the first three weeks showed the typical irregular intermittency of the manic, whereas towards the end of the hospitalization it approaches normal.

the examination for certification of the American Board of Psychiatry and Neurology.

This means that physicians planning to be qualified also in neurology should make arrangements for an additional year's training in neurology. State hospitals taking part in the teaching schedules and serving medical schools have an excellent opportunity to provide a well rounded training for the physician in the fields of psychiatry and neurology.

The graduate nurse entering the field of psychiatry should be carefully selected in terms of her general personality and fitness for this work. The clinical director should meet his nurses at regular intervals (at least once a week) for general discussions concerning the special problems involved in the nursing care of the patients.

The education of the nurse, like that of the physician, should be continuous. The superintendent of nurses and the supervisors of the arbitrary

divisions — wards for disturbed patients, semi-convalescent wards, and convalescent wards — should carefully provide for this graduate training. There should be repeated discussions of such special nursing problems as techniques involved in fever therapy in cases of general paresis and in the management of the disturbed patients; hydrotherapy; packs; occasional use of isolation; management of apathy; care of the untidy patient; methods pertaining to the prevention of suicide; interest arousal in the depressive reactions; medical and surgical features of nursing in the psychotic and psychoneurotic patients; arrangements for ward parties and for recreational therapy, and liaison activities with the department of occupational therapy.

Behavior Charts of Value

The nurse, in her carefully kept records, proves an aid in the psychotherapeutic activities of the physician. Changes in demeanor of patients can readily be determined through the behavior charts devised by Adolf Meyer. An extremely important function of psychiatric nursing is the accurate observations that nurses may make on the behavior of patients. Such observations are beneficial for diagnostic and therapeutic purposes.

The preparation of the behavior sheet is the duty of the ward nurse and the ward physician together, the record to be written by the nurse with the cooperation of the physician. When there is any question as to the behavior, the ultimate decision should be left to the physician.

The object of the behavior sheet is the recording each day of the outstanding features of a patient's activity in a graphic way so that ulti-

mately there is a record of his activity during his whole stay in the hospital, condensed into a picture instead of into words.

Likewise, carefully kept sleep graphs which Dr. Wendell Muncie devised at Phipps Psychiatric Clinic, Johns Hopkins Hospital, are of fundamental importance. The accompanying chart is illustrative.

Training of the nurse is furthered by assignments to the out-patient clinic as well as to the community clinics.

The training of occupational therapists has been well provided for by excellent schools which require several months' work in hospitals. The psychiatric social service worker is likewise indispensable for the modern mental hospital. Excellent schools provide courses supplemented with field work of from six months to a year for this group. The majority of these workers now have an M.S. degree in addition to fundamental training in general medical social service case work and study. The continued training of the social service worker is furthered by regular ward conferences, out-patient and community clinic conferences.

The training of the attendant who spends so much time on the ward in actual contact with the patient is important. Unfortunately, hospitals for the care of mental patients continue to hire and to pay inferior wages to these necessary nonprofessional groups who assume such great responsibility in the care of each patient. The wise clinical director of each hospital will arrange for courses of instruction, meeting this group regularly for discussions and informing them of the facts concerning each type of mental disorder.

Stop the Petty Thief

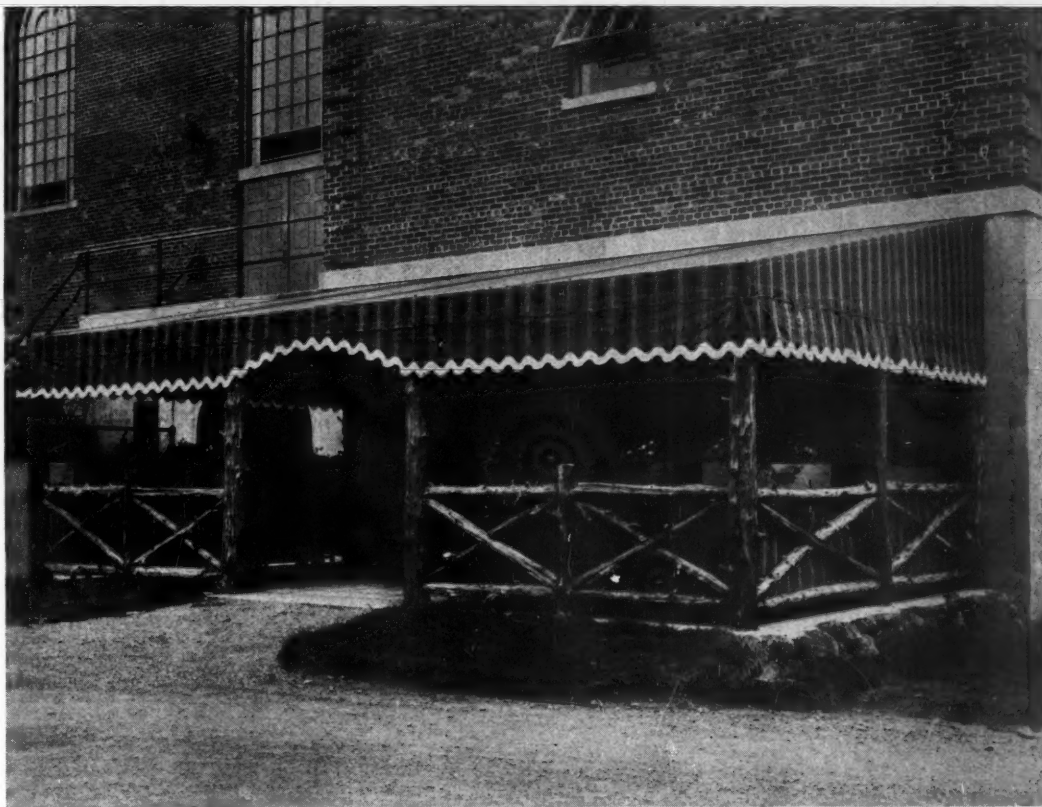
The hospital, like the hotel, is a target for petty thieves. The paying guest who snatches a fork or a face towel must be endured and even a deacon may take an ash tray or a teaspoon as a souvenir. When, however, the disappearance of electric fans or bed sheets coincides with the discharge of a patient, the hospital should adopt hotel methods of checking room equipment. The housekeeping department through its floor maids can do this routinely and immediately following the departure of the patient.

Attending doctors and special nurses often regard an institution as an everyday Santa Claus. Strictness, firmness and impartiality are the only remedies. The fact that Doctor X averages twenty-five private patients in the house does not entitle him to free rolls of adhesive for his office. In one hospital linen and silver thefts were reduced by the employment of detectives and their discovery of quantities of such hospital equipment in the apartments of special nurses living outside the hospital. The culprits who happened thus to be caught were not prosecuted but

they were denied further employment in that hospital.

In the spring an intern's fancy often turns to thoughts of loot. The theft of smaller instruments may not be a great strain on the hospital's purse or the petty thief's conscience, but even an operating table has been known to go out of a hospital window just before an intern goes into a new practice. The countenance of such larceny may be good fellowship but it is bad administration. Inventories and check lists of equipment are important at this time. Many hospitals permit departing members of their resident staff to choose what instruments they wish from those discarded or exchanged and this courtesy short-circuits many a potential pilferer.

Dribble thefts by employees are perhaps the most annoying and the most difficult to trace. It is a good rule to insist that every employee have a vacation and a department head can reasonably be suspicious when an employee prefers to stay on the job. In an efficiently administered hospital embezzlement will be difficult. Honest employees prefer a system which makes dishonesty difficult. — *Basil C. MacLean, M.D., Strong Memorial Hospital, Rochester, N. Y.*



Enter—the Sidewalk Café

By ROY D. HALLORAN, M.D.

Superintendent, Metropolitan State Hospital,
Waltham, Mass.

OPPORTUNITY to provide a homelike and community environment for patients in a large mental hospital is very limited. One of the restrictions most keenly felt, especially by those whose personalities are well preserved and by those who are recently admitted, is their inability to leave their homes, mingle in the activities of the business world and personally satisfy that natural desire to spend or just to "shop."

How often have we relieved the monotony of routine home existence by wandering through the stores and making some unimportant purchase. To satisfy this desire and to aid in the making of new adjustments a "sidewalk café" was added to the previously established hospital canteen or store in the summer of 1934. Its success after a trial of two summer seasons warrants a description of its structure and use, also a brief description of the hospital store — of which it is an outgrowth both literally and figuratively.

The "sidewalk café" is an out-of-door awning covered veranda. It is about 14 feet wide and 24 feet long, built on the ground level against one side of the hospital store, located in the basement of the recreation hall for patients and employees. It has an engagingly modern appearance and is really an adaptation of the sidewalk cafés so commonly seen in large cities in this country and in Europe. Its rustic uprights and patterned railings are fashioned from swamp cedars found on the hospital grounds. The floor is of softly tinted cement tiles also made at the hospital. The five square-topped tables and chairs are correspondingly rustic, and seat four persons to a table. Long window boxes, painted green and filled with colorful and varied plants, adorn the inside of the rail, while the awning overhead with its wide tan and green stripes lends a festive touch. This is further accented by a similarly striped canvas apron which hangs inside the rail — to serve also the useful purpose of a wind and dust shield for the patrons.

The entrance is a short distance from the patients' buildings and is readily reached by both patients and visitors. The café veranda is appro-

priately flanked with small shrubs intimately related to the landscaping of the recreational hall itself. The entire structure, with the exception of the awning and chairs, was built by patients and employees in about two weeks, all expenses being defrayed from the profits of the hospital store.

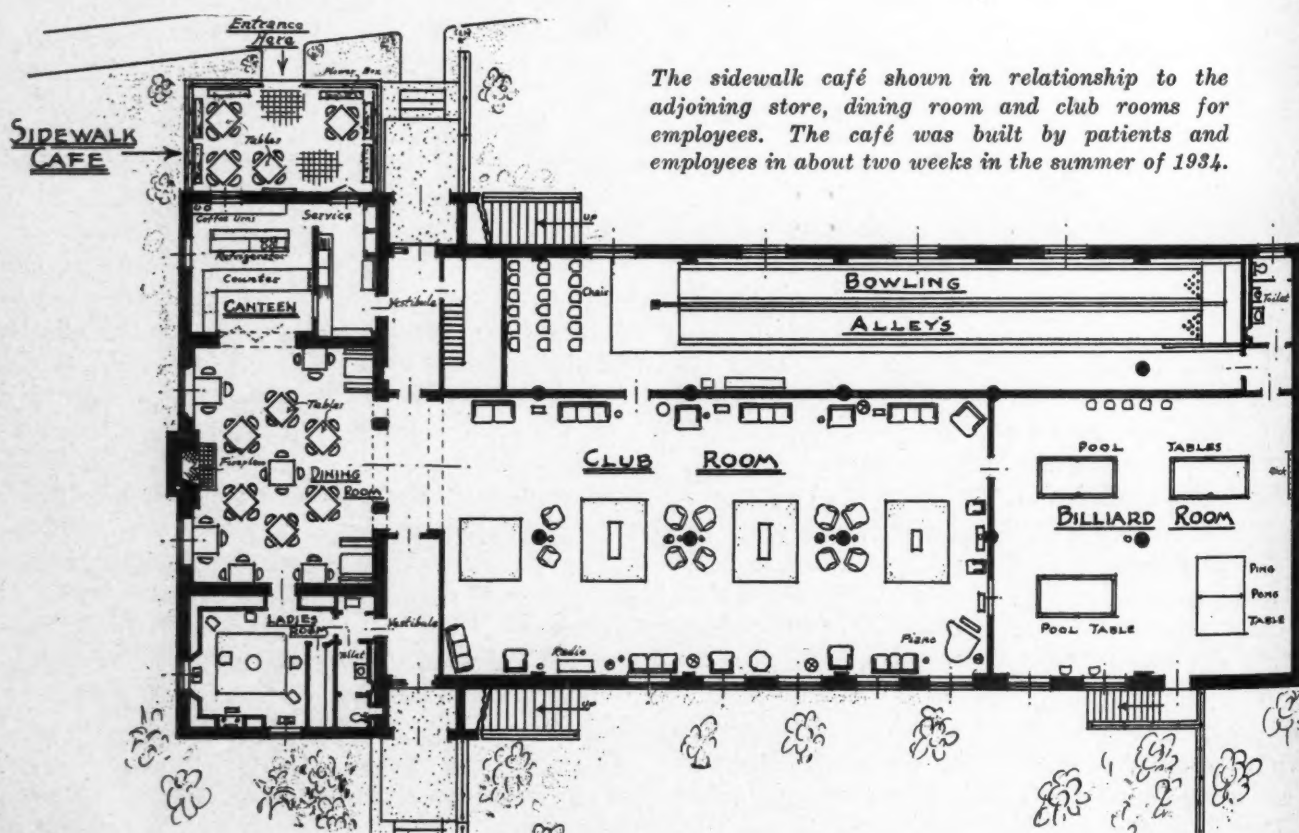
The café is serviced through a window in the outer wall of the canteen which it adjoins. This is equipped with a counter and the same articles which may be purchased from the store proper are sold from the window. A list of these, with the prices, is posted near by so that patients may make satisfactory selections. The café furnishes a sheltered out-of-door resort in which patients and their friends may entertain themselves.

That the function of the café may be better understood a brief description of the related canteen service may be of interest. It is conducted in a manner similar to that of other such stores in Massachusetts state hospitals. Usually some conveniently located basement room or portion of a building is converted into a general store in charge of an employed storekeeper, assisted by one or more patients. Here both patients and employees may buy sandwiches, candy, ice cream, tonics, also other articles, such as tobacco, stationery, toothpaste, shoe polish, sewing materials and various novelties. In some stores the variety is more extensive, in accordance with the demand. Here a lending library for employees is maintained and is well patronized. The patients have

their own library in the hospital proper. The prices are the same as those of the neighborhood shops, so that no criticism of unfair competition may be made.

The proceeds are recorded in a carefully checked cash register and are removed daily by the hospital treasurer. A separate system of book-keeping is maintained for the store. Cash is accepted from employees only as there is a hospital regulation against the possession of money by patients. No credit is allowed, which prevents the accumulation of uncollectible accounts. Usually the patients on the wards sign a requisition upon funds in the treasurer's office, deposited by relatives and friends. The amount issued is limited by hospital regulation and is transferred to the canteen account by the treasurer. Credit slips in this amount are placed with the storekeeper who permits selection of stock by patients until the fund is exhausted. The patient or relative, if unaware of the custom, is notified and further deposits may be made with further credit extended. The patient may make personal selections if he has liberty of the grounds; if confined he may sign an order upon the store. This is filled by nurses and checked by the storekeeper.

At the Metropolitan State Hospital the system of café and canteen purchase by patients has a somewhat novel feature which, it is believed, gives a more personal sense of responsibility to the patients and enables them to exercise more di-



Portrait of a Successful Physical Therapy Department

By CHARLES O. MOLANDER, M.D.

A HOSPITAL administrator who is considering the establishment of a department of physical therapy should ask himself the following questions:

1. What constitutes an adequate physical therapy service for the hospital?
2. What service will this department render for the patients' betterment?
3. Is the expenditure justifiable, and will the sum spent give an equal or greater return in service and in income than the same sum spent in other existing departments?

The answers to these questions are different for each hospital and can be ascertained only by a careful survey. The type of hospital is of first importance. In a general hospital there are many kinds of disabilities to be treated, the turnover is rapid and considerable space, equipment and help are necessary. In an industrial hospital one or two well defined groups of disability usually take precedence, therefore certain types of equipment and arrangement of space must predominate. When hospitals accept only certain groups

of patients, such as obstetric, pediatric, eye, only certain forms of physical therapy are needed. It would be wasteful, for instance, to build a hydrotherapy division for an eye hospital or a gymnasium for an obstetric hospital.

The number of beds is important in estimating the average and maximum amount of work for the department and their location in free or part-pay wards or private rooms is of concern from the standpoint of income.

Whether the patients are ambulatory or must be treated at the bedside, the expected number of new patients, the frequency of visits of old ones, the type of therapy and the length of treatment time are other pertinent considerations.

The attitude of the staff toward physical therapy must be considered, for unless the physicians send cases to it the department will be a failure. Many institutions have large, well equipped physical therapy departments which do nothing but gather dust. It is best to start with a small department. It takes time to enlighten the staff and it is much better to utilize what you have to its fullest extent before expanding.

In an existing hospital every effort should be made to start a department even though its quarters must be cramped and undesirable, thus bringing the division to the attention of the staff. In planning a new hospital definite plans should be made for using every square foot available.

Selection of a qualified physician or a well trained physical therapist is vital.

The department should be centrally placed and accessible to physicians and patients. It should not be in a basement or a secluded spot.

The x-ray department should be near at hand. Elevator and stairs should be in close proximity to facilitate quick transportation. There should be two corridors, one for out-patients and one for in-patients, so that carts and wheel chairs may be moved to and from the department without being seen and heard by ambulatory patients. The department should be near the hospital entrance for out-patients to avoid confusion and permit patients to come and go without having to walk

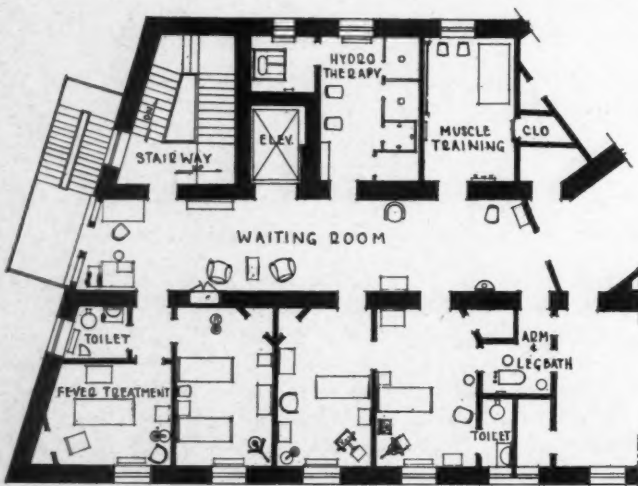


Fig. 1. The first home of the Michael Reese physical therapy department after it outgrew a single room. One room was assigned for leg work, one for arm and shoulder, one for hand, one for hyperpyrexia, one for individual gymnastics and one for hydrotherapy. The last contained a sitz bath, electric cabinet, small therapeutic hydrotherapy tank and a shower. The small room adjoining contained a whirlpool. The hallway was utilized for special exercise work and as an office and waiting room. Thirty-five to forty-five treatments a day were given in this unit.

Physical Therapy Department

Director, Department of Physical Therapy,
Michael Reese Hospital, Chicago

through the hospital. Apparatus may be taken to and from the rooms and wards, when necessary, over the route used by in-patients.

A tremendous amount of labor and expense will be saved if water and electricity are properly placed, with many wall outlets, good lighting and proper plumbing installed for both present and later equipment. Toilet facilities for each sex are necessary. All electrotherapy and light therapy should be in one section and apparatus for individual gymnastics in one large room. Hydrotherapy often needs to be on a lower floor because of the weight of the tanks, tubs, douche tables and other plumbing.

Many medical schools and large hospitals have a separate building for free and part-pay patients necessitating two departments of physical therapy. This is costly in time and money and leads to lack of coordination. All departments of physical therapy and occupational therapy should be concentrated in one place.

The possibilities of growth should be constantly kept in mind and the director of the department should plan for additional space as the number of patients increases.

In a general hospital having a high-class clientele, the ideal size for a private treatment room is 16 by 10 feet with a ceiling height of at least 10 feet. This gives just enough room for equipment and supplies and for moving carts and wheel chairs. Cart cases can be lifted to and from the treatment table. In a room smaller than this in-patients could not be given adequate attention and out-patients would feel cooped-up. The color of the room should be soft and pleasing—buff, pale green or gray. Proper ventilation necessitates a minimum of 1,000 cubic feet of air space per person with over three changes per hour. A fan in the room for warm days should not be forgotten. The temperature should range from 70° to 75° F.; however, there should be a manual control on all radiators to vary the temperature for different patients. Eighty degrees may be required for patients who are completely exposed.

The floor covering should be soft, of linoleum or a rubber composition, because technicians are

on their feet constantly. It should be kept dry for a damp floor acts as a ground. There should be at least one or two windows in each room and a window ventilator to eliminate drafts. The window sill should be high and if the window is glass down to the floor the lower portion should be stippled with a dark buff paint for privacy. The lighting should be as indirect as

possible, otherwise there should be side wall lights. The doors to each room should be wide enough to admit a cart or wheel chair comfortably, about 3 feet, 10 inches. There should be transoms over the doorway or shutters in the door which can be opened to admit air.

For de luxe patients each private room should be equipped with a toilet, a dressing room and a clothes closet. This closet can be used by technicians to store their uniforms and personal belongings. If this is impossible, a costumer should be placed in each room. Patients' clothes should not be strewn over chairs.

If there is no lavatory in association with this room, a sink should be placed in a corner, also a smooth-top table adequate in size to roll out electrodes with a drawer to store these electrodes. It is well to have a small dresser in the room for fresh linen and a wall cabinet for drugs, bandages, instruments and special electrodes. This

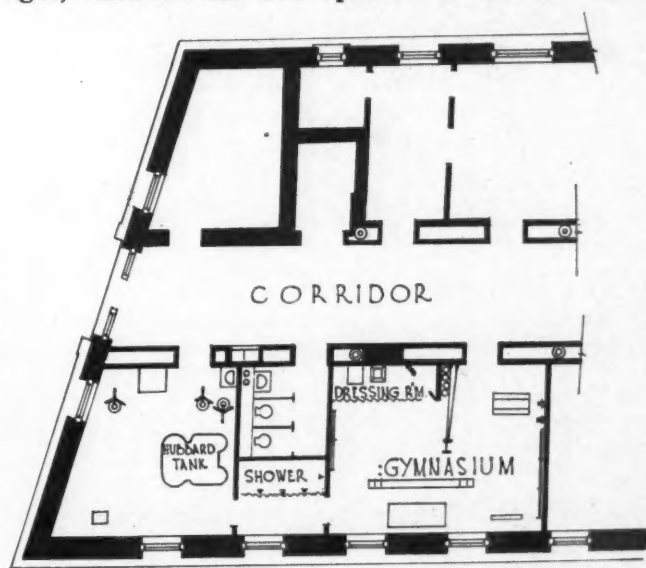


Fig. 2. The next expansion in 1934 added six more rooms. There are two treatment rooms, a small office for the director and a large therapeutic tank unit. The remaining two rooms were transformed into one large room for individual gymnastics. Part of the space formerly used for a men's toilet was made into a shower room with entrances into both the gymnasium and the tank room. This unit also was able to provide sixty-five to seventy-five treatments a day, about thirty of them in the gymnasium.

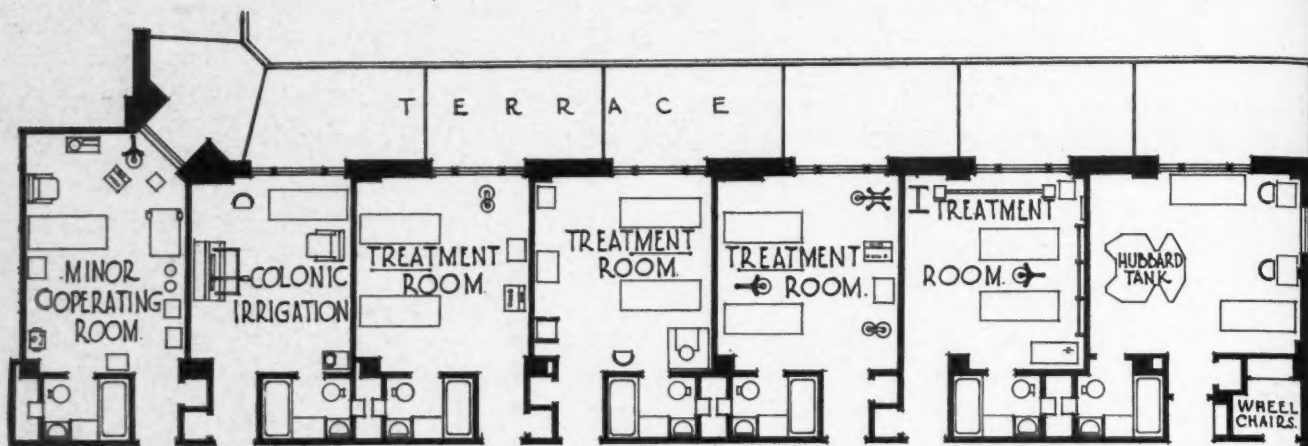
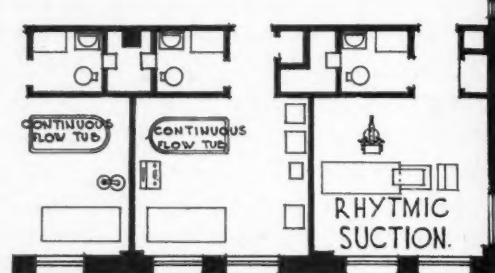


Fig. 3. The first floor Meyer House unit opened in March, 1935, took the place of the unit shown in Fig. 1, but increased the size of the total department by five rooms. The room labeled "minor operating room" is for electro-surgery and hyperpyrexia. The hydrotherapy unit includes a scotch douche, sitz bath and whirlpool. All of these specialty rooms can be converted into private treatment rooms except the hydrotherapy unit. The corridor is used as an office for the director and secretary, for exercise space and for a small library. There is a small waiting room just outside the department. Sixty-five to seventy-five treatments a day are ordinarily given in this unit.



should be equipped with lock and key. The treatment table should be 30 by 30 by 78 inches, equipped with a shelf about 12 inches from the floor for working supplies. The table should be so placed that the patient will not face a brilliant light. Back-rests and comfortable mattresses are necessary. A small sturdy footstool should be placed near the table so that the patient may get on and off the table more easily.

The wiring of the room is exceedingly important. It is well to provide both A. C. and D. C., but if there must be a choice, A. C. is preferred because most apparatus is equipped for A. C. If the current is D. C. a converter is necessary. This involves an additional expense of \$100 or \$200. Converters are exceedingly noisy and are constantly in need of repair. If there is both A. C. and D. C., there should be connecting plugs for the two currents which would make it impossible to connect apparatus to the wrong circuit. There should be one set of outlets to the room.

All physical therapy rooms must be of fireproof construction.

Passavant Hospital, Chicago, has a satisfactory unit of four private treatment rooms. These rooms are 16½ feet long and vary from 8 feet to 12½ feet in width. The department is conveniently located and patients can be brought to it from wards and rooms. Out-patients do not have to travel through the corridors and apparatus can be conveniently moved to the operating room or to the patient's bed. Each room has a connecting

door so that a technician can go quickly from one room to another.

The physical therapy department in the private section of Michael Reese Hospital, Chicago, originally consisted of a single room divided into three parts by 6-foot curtains strung on wires 7 feet from the floor. There were two treatment booths and an anteroom.

In 1930 the demand for physical therapy increased and a section of the third floor of the hospital comprising six rooms and a wide corridor with a private elevator and stairway was walled off for the department. (Fig. 1). In 1934 six additional rooms were acquired on the second floor just below the third floor section. (Fig. 2). In March, 1935, the third floor section was moved to the first floor of another building, Meyer House. This gave us five more private rooms, making seventeen in all, including the six on second floor west. These rooms were remodeled as shown. (Fig. 3). A large physical therapy department in the basement of Mandel Clinic building provides free services to out-patients. (Fig. 4).

The open clinic plan is shown best at Northwestern University Medical School, Chicago. This space is divided into cubicles with steel partitions 7 feet high and curtains are used for privacy instead of doors. There is a space adjoining the cubicles, close to the windows, divided into several sections by screens and devoted to hand, wrist and arm work. Opposite this space there is another large room used chiefly for ultraviolet

light, therapeutic tank and gymnasium work. There is a small office for the director.

Construction of a new building housing an ideal department is planned at Michael Reese Hospital. Physical therapy, which is the use of light, heat, water, air, electricity, massage and exercise in the treatment of disease, ramifies through every phase of medicine and it must serve all the divisions of the hospital. There are as yet but few all around departments and in many instances physical therapy is treated as a subdivision of another department, usually orthopedics.

For a large physical therapy department (Fig. 5) the construction of two and three-room private treatment units might be considered, one technician assigned to each unit. In this manner the technician could quickly go from one patient to the other. She would have a complete unit to herself, with her own linen supply, drugs, electrodes and certain other constantly used equipment at her command. Each room would have two electrical outlets and each outlet would be on a single circuit. In this way there would be no chance for any backsurges and there would be enough amperage so that the fuses would not be constantly blown out. At one end of the anteroom there would be a small lavatory either 3 by 5 feet or 4 by 6 feet; at the other end, a supply cabinet for linen, electrodes and drugs. It would be advisable to place the linen supply above a radiator.

Hydrotherapy Should Be on First Floor

The hydrotherapy unit should be placed on the first floor and should consist of a large hot room divided into two sections, one for men and one for women, each containing electric light cabinets, steam cabinets and similar equipment. This should open into an elongated scotch douche room with a needle shower, sitz bath and salt rub station. This room should open up into another room divided into two sections, one for men and one for women. These would be cooling and rest rooms. The sections could be partitioned for greater privacy, to accommodate several patients. Where the hospital has a psychiatric unit, rooms for continuous flow tubs and for pack tables should adjoin. It is important that these rooms be made soundproof. Smaller whirlpool rooms should be included in the hydrotherapy group, one for men and one for women. In each room there should be two whirlpools, one for arms and one for legs.

If there is great need for hydrotherapy there might be a complete division for each sex with the hydrotherapy division situated between the two departments, having double doors on either side of the rooms to act as a control.

All plumbing should be easily accessible and a

large number of clean-outs and cut-out valves should be installed.

A two or three-room hyperpyrexia unit should be used and relegated to the extreme end of the department, as these patients may be noisy. This section should be soundproofed.

Rhythmic suction apparatus is used largely for vascular disturbances of the extremities and is playing an important rôle in this field. Machines are built for either two or four boots. It is usually best to start with one extremity at a time, which means that one patient can be treated for each boot. A room divided into two cubicles and an anteroom can be used, with the machine placed in the anteroom. The cubicles should be large enough to admit a stretcher or wheel chair and

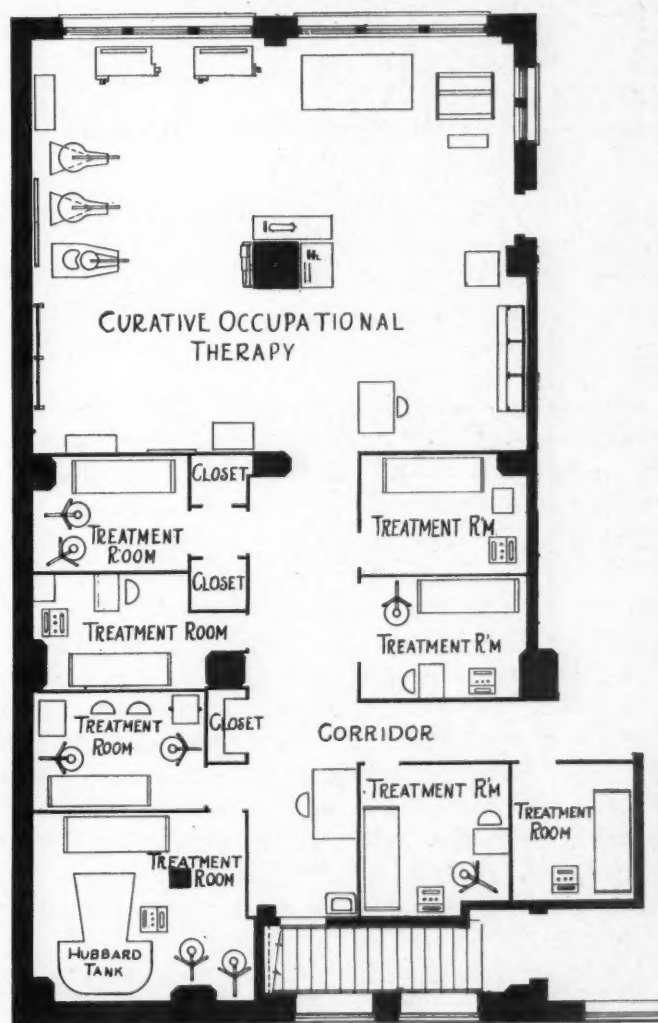
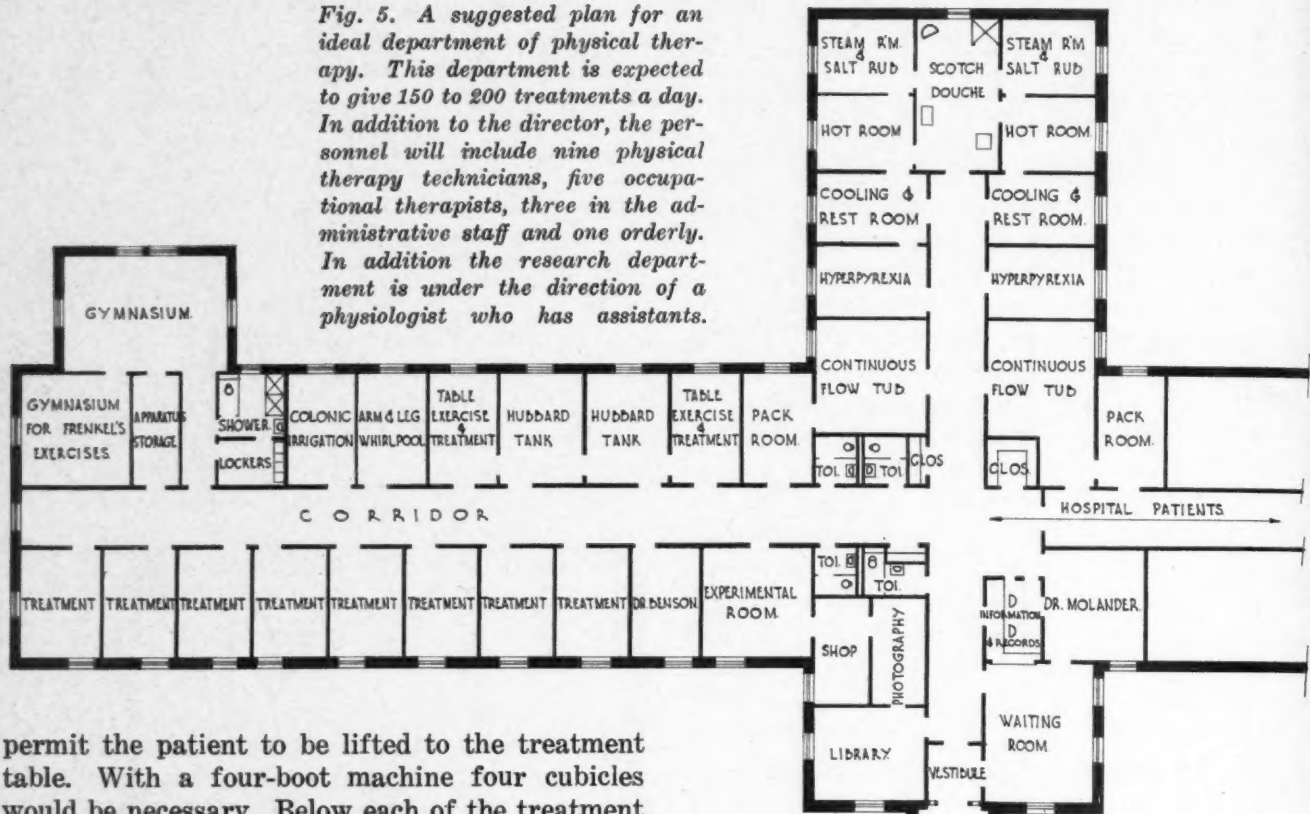


Fig. 4. The physical therapy section in the basement of Mandel Clinic at Michael Reese Hospital provides free service to thirty to forty patients a day plus ten or fifteen more who are cared for in the curative workshop. Each of the eight cubicles has steel partitions 7 feet high all the way around and each has a door. For free patients this is a poor arrangement as much time is lost opening and closing doors. One cubicle contains a whirlpool and therapeutic tank, another contains the ultraviolet lamps and the other six are utilized for treatment rooms.

Fig. 5. A suggested plan for an ideal department of physical therapy. This department is expected to give 150 to 200 treatments a day. In addition to the director, the personnel will include nine physical therapy technicians, five occupational therapists, three in the administrative staff and one orderly. In addition the research department is under the direction of a physiologist who has assistants.



permit the patient to be lifted to the treatment table. With a four-boot machine four cubicles would be necessary. Below each of the treatment tables should be a shelf, 12 inches from the floor, for a complete set of cuffs and other supplies needed for this work.

One of the private rooms may be fitted up for colonic irrigation. It is important that proper toilet facilities with good plumbing connections be installed. This will depend upon the type of colonic irrigation used.

One of the private rooms can be used for minor electro-surgery. It should be equipped with sterilizer, surgical instruments, minor operating room table and proper lighting. This room can also be used for specialty work, especially for the eye, ear, nose and throat group. The windows should be equipped with lightproof shades.

Any hospital with a good orthopedic department should have sections for underwater gymnastics and individual gymnastics to be used for such cases as infantile paralysis and spinal deformities.

A large pool for underwater gymnastics is desirable. If this is impossible, therapeutic tanks should be installed, a large one for adults and a small one for children. The tanks should be placed in two large adjoining rooms that are subdivided by complete partitions, one section containing the tank with overhead trolley, a table 30 by 30 inches by 6½ feet used for drying, and the other section equipped with a large exercise table, 30 by 40 inches wide by 6½ feet, upholstered with leather, an ultraviolet lamp and other necessary equipment, such as walkers, bicycles. Each section

must be large enough to admit a cart or wheel chair. The reason for keeping these rooms adjoining is that it is advisable to concentrate any particular phase of work in order to save the cost of construction and the time of technicians.

The large therapeutic tank measures 73 inches wide and 88 inches long; the small tank measures 60 inches wide and 80 inches long. There should be at least two feet of working space at the head of the tank if it is placed near a wall, and plenty of light for both tank and table work. This separation of tank and table work is a precaution against catching cold, as patients can be taken into the other section where the temperature and humidity are lower. A shower room should adjoin tank rooms for the use of out-patients before they enter the tanks.

A small private room 16 by 10 feet may be utilized as a gymnasium unit. As the work grows a unit of two or three rooms can be used by tearing down the connecting walls and consolidating them into one large room. The ceiling height should be at least 15 feet for flying rings, 3-way pulley, basket ball back, rope climbing and other pieces of apparatus which need to be attached to the ceiling. In considering a corrective room provision must be made for lockers, showers, a ladder room and an apparatus room, in close association. Where there are many private patients, the original small gymnasium can be utilized for them and a new one built for free patients. Locker and

shower accommodations for both sexes must be considered. The present gymnasium is 21½ by 16½ feet (Fig. 2).

A complete ultraviolet light unit should be on the roof, including a large solarium, an open porch for heliotherapy and small booths for local treatments. It should be accessible to the elevator which should be capable of carrying a hospital bed, cart or wheel chair. A southern exposure is desirable if possible, and protection from wind, smoke or ventilating pipes is necessary. This solarium should preferably be equipped with large carbon arcs, around which should be built large pipes, furnace size, from which purified warmed air is expelled and blown upon the patient at a comfortable rate. Cots should encircle the area under the carbon lights. During the summer months, if possible, the sunlight should be used and the beds wheeled out on to the porch. In association with the solarium there should be booths for the mercury vapor lamps and for other than tonic exposures.

Skin research should be made a part of this unit. The University of Michigan has such an ideal unit under the direction of Dr. Willis Peck.

Facilities for Research Needed

Any progressive physical therapy department in a teaching hospital should devote two or three rooms to teaching and research. There should be a small workshop in close proximity for the manufacture of research apparatus and the repair of equipment used in the department. Wires should be connected from the research quarters to all private treatment and clinic rooms so that treatments may be checked without patients being aware of it.

A small room near the teaching and research units should be devoted to a complete library on physical therapy and occupational therapy and another small one to photographic purposes.

Consideration should be given to such facilities as reception room, corridors, a central supply room, rest rooms, electrode cabinets, doctor's and assistant's offices, administration unit, toilet facilities, and a room for Frankel's exercises.

The size of the waiting room depends on the number of out-patients. The corridors should be at least 7 feet wide, so that carts can be swung into treatment rooms with ease. Also the corridor may be utilized for special exercise, such as walking, Frankel's exercise and possibly the administration unit. In an emergency, a section of the corridor may be divided up into small treatment booths.

The most desirable location for the director's office and examining room is at the entrance to

the department, giving easy access to the staff physicians who may wish consultation. This location also facilitates the watching of all work and the examining of all new out-patients. Special apparatus for tests and measurements and electrodiagnosis should be a part of the examining room equipment. As the department expands, an assistant's office should be provided near-by.

The administration unit should be situated in such a manner that all patients coming to the department, whether private or clinic, may be seen and dispatched to their individual treatment rooms. Here all appointments are made, all records are kept, and all business transacted. The telephones, call system to rooms and board for signals from patients are located here. All cases are assigned to technicians from this office. A secretary is in charge of this important unit, with two assistants. One is an attendant, who transports in-patients to and from the department, keeps the equipment clean and sees that all rooms are kept in order and well supplied with alcohol, cold cream and talcum powder. The other assists with the office routine, and during busy periods aids the attendant.

A central supply room for linen, drugs and other physical therapy supplies is important in a large department, as is a centrally located electrode cabinet. Having this cabinet built in the wall saves corridor space. A small smooth-top table should be placed next to it for rolling out electrodes. A cabinet for special costly electrodes should be equipped with lock and key.

Lavatories should be of the continuous flow type, having no overflow and no plugs. Blanket warmers should be placed at each end of the department.

Small private rest rooms equipped with a single bed or cot and a small dressing table and chair should be provided within easy access of the private treatment rooms. This would make it possible to use the treatment room immediately for the next patient while the previous patient is using the rest room for a half-hour or more.

One of the private rooms may be equipped for curative occupational therapy. Many patients need this type of therapy.

Cash in Advance

In some communities a hospital may safely adopt a policy of cash in advance for hospital room rent, x-ray or laboratory charges unless credit has been previously arranged. Where this has not been the practice, its establishment will be followed by a painful period of educating the public. The end result, however, is satisfactory to the client as well as to the hospital. This policy has the endorsement of many hospitals with years of experience behind them.



When It's Time to Furnish the New Wing

MANY suggestions for attractive hospital interiors are to be found in the new wing of the Charles S. Wilson Memorial Hospital, Johnson City, N. Y. Soft colors predominate, made more effective by the introduction of contrasting shades in hangings and accessories.

For those whose taste runs to the modern, a de luxe private room is available characteristic of the streamline period. Its metal lounge chair and small armchair bespeak spacious comfort, despite the rigid simplicity of design. The bed table also of metal, sweeps gracefully over the bed which is as typically modern in its severity. Add to these one small flat top desk boasting substantial drawer space and an air of cool business efficiency, also a side table or two, and the scene is set.

Walls in this particular room are pale yellow with hangings of green. Fashion note No. 1—hangings looped back and falling straight to the floor will work

wonders in breaking the monotony of too much wall space. Another point that is well to remember—Venetian blinds are steadily gaining in popularity. The chairs are upholstered in green, and the bed cover is also green, piped in yellow bearing the monogram of the hospital also in yellow. The stand of the bed table, too, is finished in yellow. A small green rug softens the effect of the terrazzo floor.

Before passing to other decorative features of the new wing, a word or two should be included about the building itself. It is five stories with a basement suitable for storage. Its first floor joins to the rear of the main building from a hallway. "This floor," Robert L. Eckelberger, superintendent explains, "along with the first floor of the main building, is devoted entirely to administration, including the outpatient, x-ray, physiotherapy and dental departments, electro-cardiography, laboratory, drug room and offices."



Hardly recognizable is the staff dining room with its walls and casings in light green with venetian blinds to match. Tables and chairs are metal, finished in Chinese red with table tops of wood covered with a cream veneer, acid and waterproof. The chair bottoms, believe it or not, are white imitation leather and washable. On either side of the large window which is built out to enclose a radiator is an open cupboard painted on the inside in Chinese red.



Pale green was selected as the color for the nursery walls with window curtains a slightly deeper shade of the same color. Indirect lighting fixtures are silver. The painting between the windows at once attracts the eye of the visitor.

Someone Has Asked—

What Charge Should Be Made for Anesthesia?

Special charges in the hospital often constitute at least 50 per cent of the patient's bill. It is disconcerting to the public to find no standard charge for operating room, anesthesia and laboratory service.

The usual fee for an anesthetic for a major operation is \$10. If ether is employed, the hospital realizes a profit on this fee. If gas and oxygen are administered, particularly if no re-breathing apparatus is in use, the cost to the hospital may approximate \$3 or \$4 an hour. Indeed, in some institutions, the anesthetic charge is made on an hourly basis for gas and oxygen. In others a flat rate is set. Some difficulty is experienced in arriving at a fair fee for short anesthetics such as those employed in minor operations and in the extraction of teeth. Usually the rate for this type of service is \$5, although in some instances it is as low as \$2.50.

An anesthetic charge of \$10 for major and \$5 for minor operations does not appear to be excessive when it is considered that the hospital is furnishing the service of a skilled anesthetist as well as the expensive apparatus and drugs with which she works.—J. C. D.

Who Should Control Oxygen Therapy Service?

The oxygen therapy service of a large general hospital, I believe, automatically falls under the control of the director of the department of anesthesia, whose staff should be familiar with the maintenance of this type of equipment and should be held responsible for its proper working order, so that it may be available for use at a moment's notice.

Requisitions for this service should be sent to the head of the department of anesthesia from the attending physician or surgeon in charge of the case, and the head or one of his deputies should in turn deliver the equipment to the bedside of the patient, see that the therapy is properly inaugurated and satisfy himself that further supervision has been placed in the hands of a reliable house officer, under whose care, as far as the resident

staff are concerned, the patient is assigned upon admission.

The anesthetist in chief should be held responsible for the satisfactory administration of the gas as long as it may be required, following which the equipment is returned to his department for checking.

This arrangement has the following advantages:

1. The responsibility is placed upon one person.

2. Assuming the department of anesthesia is adjacent to the operating rooms, the equipment is available for use in that department in emergencies and the personnel of that department care for the maintenance of the equipment when they might otherwise be unemployed.

3. It necessitates that sufficient instruction be given all new members of the house staff in regard to the administration of oxygen therapy from the various forms of apparatus that may be in use.—JOHN C. MACKENZIE, M.D.

What Education Does the Engineer Need?

This question is submitted by an engineer at a Southern county hospital who states that he is endeavoring to increase his ability to serve his hospital by furthering his education along technical lines.

A specific answer to the above question is somewhat difficult to find. Many highly skilled hospital engineers have not enjoyed the benefit of a great deal of technical training. Some have not even completed a high school course. Nevertheless, because of long years of apprenticeship they have acquired a practical knowledge of engines, boilers, dynamos and pumps sufficient for the requirements of their position.

Hospital engineers dependent upon local regulations should be duly licensed. Training and experience as a plumber, electrician or other technical worker prior to assuming the position of engineer add to the individual's capabilities. Many good hospital engineers have at one time been employed in the marine service. A few are technically trained, holding degrees from some recognized school or college.

An engineer who is practically

trained and who desires to improve his knowledge may often do so by taking a correspondence course in physics, chemistry or engineering. Whenever a superintendent learns that his engineer is desirous of improving his education he should assist him in every possible way.—J. C. D.

What Visiting Privileges Should Be Granted in Wards?

Visiting privileges for ward patients show wide variation in hospitals, from nothing at all in the case of children, to unrestricted visiting in the case of certain foreign hospitals, in which families are, indeed, permitted unlimited opportunities to nurse and feed sick relatives. What shall we do to protect the interests of the patient, his ward neighbors and his relatives and friends?

In a general way visiting that does not interfere with hospital routine or the privacy of neighboring patients and is helpful to the recovery of the sick should be permitted. A general rule establishing regular visiting hours for ward patients while ward routine is discontinued except in emergencies, and permitting special privileges for the seriously sick is, of course, the obvious way, provided this rule is not administered inflexibly and patients are permitted additional visiting under exceptional circumstances.

The exceptional circumstances do, however, trouble most of us, particularly in the larger hospitals. An additional criterion that should be of some value in influencing the decision, is the need of the patient rather than the need of his visitor. It must be remembered that hospitals are conducted for the treatment of the sick and not for their healthy relatives. If this could be made clear to an insistent inquirer, much could be gained.

Most patients fare better when left alone, or with visiting privileges strictly limited by prescription to the closest relatives and friends. Unrestrained callers in wards may be depended upon to do and say the wrong thing at the wrong time and to interfere with the patient's diagnostic and therapeutic routine in nursing, medication, feeding, and in the exercise of his natural functions. Excitement in a patient who is sick or in pain does him and his visitors no good. If these considerations could be explained to callers in a manner that would enlist their cooperation, much could be gained for the patient with his natural tendency to recovery when left undisturbed.—E. M. BLUESTONE, M.D.

Planning Hospital Communication

By JOHN GORRELL, M.D.
Superintendent, Falk Clinic, Pittsburgh

A THOROUGH review of all methods of hospital communication should be made from time to time to be sure that the most economical and effective methods are used. This will include consideration of the salaries and the maintenance and depreciation costs involved in written messages and house mail, house organs, conveyors or tubes, telephones, paging systems, in and out systems, special alarm systems, patient-nurse calling and communication systems and local or limited signal systems such as those on elevators and dumbwaiters.

Telephone service is a major method of hospital communication. Its cost is frequently considered to be the amount on the monthly statement. For at least two reasons this does not tell the complete story.

On private automatic exchanges (P.A.X.) the expensive equipment is installed only on reasonable assurance that the utility will recover a rental to justify the installation. The contract, usually for five years or more, is a contingent liability. Cancellation of the contract in the case of one small hospital in the East cost the hospital nearly \$1,000.

It is customary to bill in advance for equipment rental. When this sum is several hundred

or several thousand dollars a month, there is a substantial amount of interest lost by paying in advance. The frequent procedure is to pay for the services rendered and ignore the requested prepayment. The company will not object.

The monthly statement usually lists first the number of excess local messages. This is the difference between the total outgoing local calls (where a charge is made for these) minus the number allotted per month with the type of equipment. The latter is usually only a small fraction of the total calls.

Local messages from patients, friends and others should be routed through pay stations established in the hospital. This is businesslike; it relieves the hospital switchboard of this additional traffic (which usually comes at times of peak load) and it provides a source of revenue to the hospital.

The control of local messages becomes increasingly difficult as the number of employees, staff members, interns and patients increases. More liberties are assumed because of the greater complexity of control. Complete control becomes virtually impossible. The restriction of direct lines to the community is well executed in most hospitals. With a P.A.X. this is easily accomplished

RECOMMENDED TYPES OF COMMUNICATION FOR HOSPITALS OF VARIOUS SIZES

Type of Communication	Size of Hospital in Beds					
	25	50	75-150	150-300	300-600	600-up
Written messages (formal system)	No	No	Yes	Yes	Yes	Yes
Electrically written messages	No	No	No	Yes ¹	Yes ¹	Yes ¹
House organ	No	No	No	1 to 3 times year	Alternate monthly	Monthly
Central mail	At office	At office	At office	At office	Departmental	Departmental
Conveyors or tubes	No	No	No	Either	Either	Either
Telephone switchboard	Manual	Manual	Manual	Manual	Automatic	Automatic
Special service	Fire	Fire	Fire	Watchman, fire and police	Watchman, fire and police	Watchman, fire and police
In and out system	Block	Block	Block	Electrical ¹	Electrical ¹	Electrical ¹
Paging system	Audible Coded	Audible Coded	Audible Coded	Silent Coded	Silent	Silent
2nd choice				Audible Vocal	Audible Vocal	Audible Vocal
Patient-nurse	Standard	Standard	Standard	Standard ²	Standard ²	Standard ²

¹—Especially if O. P. D. is large.

²—Plus vocal (i.e. telephonic) service if possible.

by permitting only certain telephones to have unrestricted service. These unrestricted instruments can make connections with an outgoing trunk line by dialing a definite figure (as number 9) before dialing or giving the desired number. If a restricted phone is so dialed, the call will come up on the hospital board.

Some institutions require that all persons making outside local calls give their names and whether the call is for personal or business reasons. In large institutions if the call is for business and there is no reason to doubt the caller's honesty, no record is kept. In smaller hospitals (up to several hundred beds) the name of the person and nature of the call are recorded. The morning following this list is placed on the desk of the administrator.

Reducing Personal Telephone Calls

Some large hospitals (400 beds and up) have been reasonably satisfied with the following plan of reducing personal local messages. The operator makes a slip of each message and at the end of the month the business office invoices the employee for the calls at the standard coin box fee. While the collections from such statements are poor, one hospital of 400 beds found that the number of personal calls a month was reduced by about three times the cost of invoicing.

The telephone companies can almost always supply any type of service desired as the engineering facilities are enormous. Yet too often the company is reluctant to provide the equipment or service unless it is specifically listed under the tariff, as the law provides that they cannot charge except as listed by the tariff. If the tariff does not mention the service equipment, they do not know what rental to charge. Usually they select, with the user's permission, the nearest similar tariff-acknowledged equipment and charge its rental.

Rental of equipment is the most difficult item to control. With a P.A.X. the problem is worse than with a manual board. On the latter, the cost per instrument plus twenty-five to fifty cents each month will pay the rental up to the capacity of the board. With a P.A.X., however, the instrument rental is almost secondary.

Much of the cost of P.A.X. automatic switching equipment may be laid directly at the door of the administrator. The usual history is this: At the time the P.A.X. was ordered, the utility asked for certain essential information including the expected growth or expansion. Cables should be run for the maximum service to be reasonably anticipated in the coming five to twenty years. To be prepared for this expansion, re-service switch-

ing equipment is added. The administrator makes his estimates of future needs as large as he thinks possible; not as small as he feels will be probable. He does not realize that a monthly rental will be charged on the unneeded equipment.

The net result is that the P.A.X. costs far more than he thought. Not being familiar with the technical details, he is unable to know if excessive equipment is being rented. The utility does not usually question his judgment.

A case in point demonstrates this. A 400-bed hospital with a large out-patient department had a monthly telephone bill of about \$1,000. Equipment rental was a large percentage of this. Efforts were made to reduce this cost without success. An independent expert was called in. He discovered the above typical circumstances. He had the surplus equipment removed, which amounted to almost one-half of the switching and associated apparatus. He made other changes, added a few telephones and decreased the yearly cost by \$5,000 without impairing service in the slightest.

In addition to equipment rental, there is the cost of installation. The utility supplies cable to the switchboard through a conduit supplied by the hospital. In small hospitals or those off the main highways there may also be cable costs, pole costs and conduit costs to the building. Buried cable is fairly expensive.

Hospital or Utility Ownership of Lines

This makes it worthwhile to plan carefully for all future expansion and moving of instruments as the installation of conduit in a completed building rapidly runs into great expense. Open wiring is so unsightly that most hospitals will not tolerate it. Conduits between floors, to boxes, to switchboards and to apparatus rooms (where the P.A.X. is located) must all be supplied by the hospital at its own cost.

In many states, the cable is the property of the utility. In some states, the hospital may purchase it and thus avoid rental (as between buildings). It may then be maintained by the utility or the hospital, though the former is the preferred method.

Wires from junction boxes to telephone instruments are placed and supplied by the telephone company. The cost of such installation covers the cost of wire. Thus it automatically becomes the property of the hospital but cannot be used for other circuits than utility telephone service without the specific permission of the utility because of the fire and personal injury hazard.

One is sometimes provoked because of the size of a charge for a relatively simple installation.

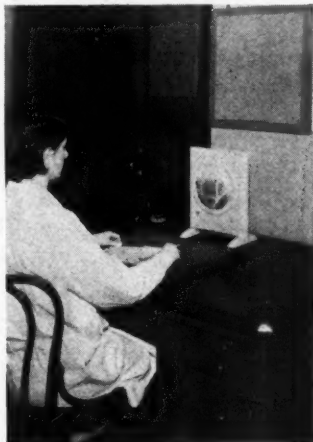
The consumer tends to overlook the loss to the company on other types of work. In a certain out-patient department, for example, the manual board was moved from an upper floor to the lobby side room where at dull periods the operator could act as general information clerk. The telephone company engineers estimated that this cost four to five hundred dollars. Yet they were only permitted to charge the price of a new installation, about \$125.

Maintenance of their own equipment is a problem of the utility. When the hospital owns the equipment, maintenance presents a real problem which is best solved in one of two clear-cut ways, (a) by a service contract with the firm selling and servicing that make of telephone equipment or (b) by having this firm or other qualified service men render service upon call. During the days of part-time employment of utility telephone men, the utility companies were happy to have their men receive additional income. Usually the placing of maintenance responsibility on the hospital engineer or handyman is a grave error comparable to having the chief orderly do an appendectomy. Most administrators will not believe this until they have a large bill to pay.

Maintenance of a small hospital owned system should not be expensive. For a board of two hundred lines, the company selling it (or installing it if used equipment is bought) will supply all labor and parts at cost, for as little as \$75 to \$120 a year, depending upon the distance from metropolitan areas. Many a small private exchange needs no service for months.

On hospital owned systems the cost of depreciation and obsolescence falls on the hospital. Sixteen per cent is the figure some utilities charge the subscriber for these items. A privately owned system is usually considered to have a life of not less than twenty years; many far older systems have little need for replacement, due to depreciation or obsolescence. On this basis, 5 per cent of the cost of equipment is sufficient. If the wiring

Loud speakers on attendants' desks or mounted on walls, broadcast calls throughout the New York Hospital. A key held by the chief electrician enables him to regulate the loudness of the call so that it is not likely to disturb patients.



is all indoors and properly installed, its life will be about twice the life of the equipment.

Tolls and telegrams are usually easier to control than excess local messages unless there are unrestricted telephones available to patients, employees and the general public. When the hospital renders any material aid in facilitating telegrams, a contract should be sought under the tariff which gives a percentage of the gross busi-



At this "message center" an operator, speaking into the microphone on the extension arm can be heard on loud speakers throughout the New York Hospital, or by throwing keys in the box at her left she can send the call only into the section where the physician is likely to be. Stepping to the nearest telephone, the doctor dials a certain number which connects him to the operator, who puts his call through to him.

ness to the hospital. In large hospitals this may be a substantial figure. If the contract is properly drawn it will include telegrams regardless of source, including hospital business. This refund is usually due even if there is only a direct line to call the messenger or a direct wire to telephone telegrams.

Money can frequently be saved by asking a taxicab company to put in a direct line at their own expense. This saves the cost of routing these calls through the hospital switchboard. The taxicab phone may be placed at the switchboard, the information desk or near the doorman.

In addition to the usual outside and house telephone systems, there are telephones which connect only two or three stations, such as the information desk to the doorman or taxicab or the secretary to the administrator's office.

With a specialized mechanism of this type, a master station is so constructed that the individual using the equipment need not be closer than a yard to speak into or hear return messages

from the equipment on his desk. The user of a substation, of which there may be one or many, must place the receiver to her ear and ordinarily be within a foot of the instrument when speaking. This equipment has wide applications. For example, in some hospitals the administrator has on his desk a master station and a substation in every ward or nursing station, as well as in each major department. This in effect gives many of the advantages of a P.A.X.

The cost for this type of mechanism runs from \$30 to \$60 a station plus the cable cost. For complete intracommunication every substation must have wires from every other substation. The cable is expensive to purchase and requires careful installation and protection from injury.

Paging is possible under one or more of the following systems or combinations thereof: (A) Audible: (1) bell, gong, telegraph sounder, or (2) spoken voice; and (B) Visual: (1) lights, colored or clear, or (2) characters (figures or letters) illuminated but in code.

Ideal Paging System Is Uncoded

Audible calling has the advantage that it is inexpensive to install, to operate and to maintain. It carries around corners and gets attention from persons who might not see any visual signal. The greatest disadvantage is that the effect is often annoying to patients and others.

When coded calling is used, whether audible or visible, rarely does anyone but the person called know who is wanted. Thus, he can ignore his code and others will not be aware that he is neglecting his duty. To avoid coding, the name of the person being paged must be spoken or printed so that all may read.

The closest to an ideal system appears to be the silent call where no coding is required.

The size of the paging system is proportionate to two factors—the size and the habits of the medical and administrative staffs. For example, a hospital with an average of 1,000 to 1,200 patients and a large out-patient department has a paging system composed of eight colored lights throughout the building and, for the interns' quarters, a coded calling system of marked simplicity. Another hospital of 300 beds and a smaller out-patient department uses a paging system of some considerable cost. It is used almost continuously.

In the former case, the system is used only for urgent or quasi-urgent calls; in the latter, the paging is done on the slightest provocation because the personnel have learned that it is rapid and accurate. The operator is the last person to question the merit of any request for paging. This is not a criticism of either institution because

each organization is built around its paging system.

The paging system may also be used for simple announcements which are easily coded. For example, if a necropsy is scheduled for 11:20, the operator will call the resident on pathology and at the same time notify the entire medical staff, but not patients, by paging vocally, "Dr. Brown, Dr. Horace Brown . . . one one two oh." On visual systems the figure "13" is frequently used and members of the staff call the operator for details.

Frequently a runner is used to serve in lieu of an audible paging system after bedtime or in the interns' quarters at night when young people sleep through signals and gongs.

As a rule visual coded systems are among the least expensive, the most nearly foolproof and the simplest. They may consist of any number of lights and a variety of possible positions. The usual method is to have from two to ten ordinary electric light bulbs of various colors. The combination of color and position serves as the code. A recent development is an arrangement of bull's eye lights like figures on a clock. With this plan a greater number of possible codes are easily obtainable. By putting two or more different colored bulbs behind each bull's eye, the number of possible combinations increases with amazing speed.

Disadvantages of Simultaneous Paging

An "in and out" system with full names on a glass is simple and flexible but for general paging purposes is too bulky. For example, the Montreal General Hospital has a square box containing approximately sixty squares, each with a different figure. Each member of the house staff, certain administrative officers, and a few department heads have numbers on this board. The system has a disadvantage of requiring at least sixty-one wires to every box in the hospital. Also the more lights that burn at one time, the lower becomes the illuminosity of each, unless this is especially provided for. It is the only system, however, that permits simultaneous paging of from one to sixty persons.

One common system uses colored lights flashed simultaneously with the number being paged. This multiplies the capacity of the system. Almost any type of visual coded system can have its present capacity doubled or quadrupled by the simple addition of colored lights and flickering lamps. This can usually be done without adding more than one or two wires, if any.

For limited paging service when cost is a factor buzzers or bells may be used, but they are not ordinarily recommended.

Noncoded paging with audible apparatus is becoming more common. Everyone is familiar with the loud speaker type. If such a system is contemplated, the electrical characteristics should be well known. The early low voltage and low impedance type has proved unsatisfactory. A high voltage, exceedingly low amperage, high impedance system alone has given a clear tone and other requisite features.

Not available at present is an apparently ideal noncoded visual calling system. In this the name of the individual desired is flashed by means of spelling units. The number of persons to be called simultaneously is proportional to the units installed.

When System Should Be Installed

The paging system should be installed, when possible, at the time the building is constructed. This is not quite as important if a two-wire system is to be used, as in a high impedance vocal calling system, in which case a small cable of less size than a lead pencil carries more than enough current for many speakers. This cable is relatively inexpensive and suitable for indoor installation.

The source and type of power are influenced only by the type of equipment. No stringency should be exerted in the power unit of any paging system, and if dependence is placed upon batteries, a reserve source of power should always be available. A power failure in a paging system of a hospital of from 300 to 1,200 beds immediately reduces the switchboard efficiency by at least 50 per cent and produces general chaos. Extensive utilization of the paging system is a habit.

Frequently the individual to be paged has his entire activities limited within one area, such as a single building or a portion of a building. There is no need to page him over the entire network, unless intensive calling in this restricted area has failed or there is reason to believe that he is not there. The selection of areas is easy if the system has been planned with this in mind.

Fortunately almost no maintenance is required of any standard type of paging equipment. Unless of the condenser type, the microphone on the loud speaker type does require periodical rebuilding. Replacement and repair of the equipment should be almost nil and it may be easily maintained by the average hospital engineer.

Communication between the bedridden patient and the nurse in charge is a problem upon which much valuable work has been performed. This system may be merely a buzzer or lighted signal at the nurse's desk. Most save nursing time by having also an indicating light above the patient's

door. In every modern system the signal can be cancelled only at the bedside of the patient. This helps assure proper nursing and has a highly satisfactory effect on the patient.

A superior mechanism is available in the form of a telephone or modified telephone placed at a patient's bedside. In the modified form the patient may speak and hear even though several feet away from the instrument.

G. Rush Willet has been developing improvements on a standard telephone as supplied by the utility companies. The patient's telephone may be used for communication to the nurse's station without necessarily going through the hospital switchboard. A number of excellent niceties are also included. For example, a modest but effective pilot light accompanied by a low toned sound notifies the patient of a call. If the patient is asleep, the signal lamp and soft sound do not arouse him but the light remains on until he calls the operator on awaking.

Mr. Willet's system also permits a patient to signal the nursing station by merely lifting the receiver from the hook of the cradle phone. Thus if the patient is unable to talk, as in the case of postoperative tonsillectomy, he may receive prompt nursing attention.

Less expensive types of patient-nurse telephone communication have been established where the patient has a small disc which serves as both transmitter and receiver telephone. This is of lower cost and reasonably satisfactory. It may be placed under the pillow or other accessible area on the bed. It is exceedingly simple and maintenance should be inexpensive. Its chief disadvantage is that the patient must press the button when he wants to speak and release it when he wishes to listen.

A subsequent article will discuss several other specialized types of hospital communication.

Renting Equipment to the Staff

Institutions operating central supply units can popularize their institutions and their entire staff by the inauguration of a rental service, which permits staff members who wish to use syringes of odd sizes, hypodermoclysis outfits, emergency operating sets and similar equipment outside of the hospital, in adjacent towns, or in homes, as the case may be, to rent such equipment.

For this service nominal charges can be made depending upon the amount and type of equipment rented. All breakage is paid for by the member renting such equipment.

In addition to making desirable contacts with prospective patients the hospital is rendering a service to the staff member. It has been found that such dressings as may be required for discharged patients can be handled through this department advantageously.—*George D. Sheats, Baptist Memorial Hospital, Memphis, Tenn.*

Why Didn't I Think of That?*

FOLLOWING any disastrous loss of life, it is common to call into session a board of inquiry. In military affairs, such a board convenes to fix the blame for a devastating explosion, an airplane collapse or the sinking of a vessel on the high seas. Beyond the fact that effective preventive measures sometimes are evolved, little or no benefit ensues from the standpoint of the immediate loss of life or property.

At some time prior to an accident, some evidence might have been discovered which if acted upon would have prevented the occurrence. Many such happenings have inherent in them factors under the control of man. So it is in regard to hospital accidents. It seems wholly proper therefore when the maintenance, the repair and even the construction of hospitals are being considered to comment upon the relation of the physical side of the administration of the hospital to dangers that continually threaten in some degree every one of its patients.

Anything can happen in a hospital. Seasoned administrators will heartily agree to this. This institution handles lethal drugs of all sorts and gases that require but the right combination of circumstances to bring about violent and destructive explosions. In addition, here are found patients with minds weakened by disease who in fits of despondency sometimes terminate their own lives.

There is always a time and place when discerning eyes may detect the possibilities of danger arising from accident. Yet even a trained administrative inspector is not always able to discover these circumstances. The first step toward the prevention of accidents is the appreciation of their possibility—of the fact that faulty construction, organization or personnel training may bring danger to patients. One too often hears the query, "Why did I not think of that?" This is an incrimination of the keenness of vision or of insight of a hospital executive. Of course, construction and maintenance practices may approach the ideal and yet, through the obtuseness of orderlies,

nurses or others, preventable accidents costing mints of money and perhaps lives may occur. In this article will be described mishaps that have occurred in the experience of but one administrator.

Accidents may be of two types, those resulting in the loss of property and those threatening the safety of patients. The care and the maintenance of the moving machinery and equipment of the heat, light and power department are of the highest importance. Neglected by a poorly organized mechanical group, it may suddenly break down, bringing discomfort to patients, halting the work of the surgeon and indeed immediately obstructing the wheels of hospital work.

The power house, often neglected in the rounds of the superintendent, is one of those utilitarian departments which in some cases is expected to deliver heat and light day in and day out with a minimum of care and supervision. The possibilities of mechanical break-down are many. In the power house of a large city hospital in which mechanical stokers were in use, a long bucket system delivered coal to overhead bunkers and removed ashes from the pits below. A breakdown

in this bucket line occurring in winter made heating the institution almost impossible, lowered steam pressure so that the laundry, kitchens and operating rooms were hardly able to function and cost the hospital through new parts, emergency help and overtime approximately \$4,500.

A proper periodic inspection would have prevented this accident. All such essential equipment should either be constructed in duplicate or some provision for the emergency delivery of coal and the removal of ashes should be made. In this instance a short-sighted architect failed to take this precaution. Essential equipment such as elevators, dumb-waiters, generators, boilers, steam lines and main electric cables should be supplied with duplicate emergency equipment or else some other provision should be made for meeting unusual situations.

Where long steam leads connect the power

An administrator needs to be something of a prophet and to have many of the attributes of a detective so that he may help to prevent expensive and fatal accidents such as are described here

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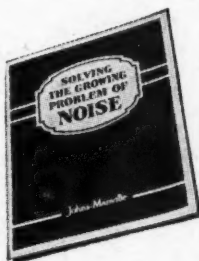
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house and hospital buildings, joints must be packed from time to time and sections of pipe through long usage are sure to yield to pressure from within and at the most inopportune moment require repair or replacement. Electric cables carried underground if not carefully maintained are likely to burn out and leave the hospital without light or power.

Good construction does not countenance the running of electric cables in the same conduit with steam lines. Moisture or escaping steam is likely to deteriorate cables no matter how well built, grounding and burning them out with disastrous results to the hospital. Where electricity is manufactured by the hospital a careful superintendent provides for an emergency service from an outside source, so that in case of accident to the institution's plant, light and electric power at least will not be interrupted. When electricity is purchased from a private or municipal plant, an automatic cut-in is employed so that when the current from one generator ceases that from another is immediately supplied without the delay incident to manual control switches.

Architects and construction engineers do not always possess the knowledge and foresight necessary to avoid mechanical accidents. In a certain hospital a new 500-kilowatt electric generator was installed costing \$27,000. The air vent intended to supply cooling to this generator was connected with a pipe tunnel rather than opening to the outside atmosphere. A broken steam joint poured moisture through the air intake vent and a short circuit resulted with the almost total destruction of the generator. This accident cost the hospital half the price of the original equipment for repairs. The architect insisting that faulty mechanical supervision was the cause disclaimed all responsibility and the contractor of course easily proved that he was following the instructions of the architect. A wide-awake administrator might have observed this blunder on the part of an otherwise careful construction engineer and might have averted a financial catastrophe.

How the Far-Sighted Executive Can Help

Hospital executives of long experience become informed on many subjects and in some instances appear to have an uncanny premonition as to the effect of mechanical mistakes in construction and maintenance. To point out to an electrical engineer that it is a mistake in the construction of a new or in the renovation of an old building to forget to provide lines capable of carrying 220 volts when running light cables often saves future difficulty. Electric power is employed for so many purposes about the hospital that to lay such

lines for future use saves defacement of new buildings and often much expense. Far-sighted executives, when the occasion arises, supply many outlet plugs for the use of cleaning apparatus, for unexpected lighting requirements or for supplying current for diagnostic equipment.

It is a splendid suggestion to consider the installation of piping for supplying nitrous oxide gas to the operating room from a central plant or cylinder room at some distant point in the hospital. This method has proved efficient and makes possible the purchase of nitrous oxide in larger cylinders with a consequent saving in cost. Because of the rapidly increasing use of oxygen therapy, a comparable arrangement for it should also be considered.

Cooperating With the Architect

Here again is an argument for having the services of a trained administrator as consultant in the construction of such buildings. The architect, no matter how skilled and far-sighted, cannot be expected to forecast such future needs or even to supply all the present mechanical aids that are so necessary.

Gross mistakes of a less technical nature than those mentioned above sometimes endanger the lives of patients and frequently bring about much unnecessary expense for repairs. In a certain new institution in which wards 40 feet square were employed, without warning the plaster from most of a ceiling in one of these rooms crashed to the floor. Fortunately this mishap occurred during meal hours when these ambulatory patients were not exposed to danger.

An examination of the cause of this accident revealed the fact that wire laths were employed and these were attached by wire clips to the steel rafters at too infrequent intervals. As the building aged and as moisture rusted these wire attachments, many hundreds of pounds of plaster tore away from this anchorage.

In another hospital a heavy light suspended by a wire cable over an operating table crashed. It had appeared to be nobody's particular concern to inspect the anchorage of this cable in the attic space above the operating room, and administrative inspections had never discovered the possibility of such an accident. Fortunately the operating room was vacant at the time.

It is a splendid plan for a regular inspection of all such hanging equipment to be made since no cable of any dimension or construction is everlasting and the gradual breaking in a few strands is likely to lead to disaster. "Why didn't I think of this?" remarks the executive. The answer is certainly because of overwork or plain inefficiency.

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ICING OR CURRENT COSTS
PLUS MAINTENANCE
ON PRESENT
REFRIGERATION
EQUIPMENT**

VS.

SURVEY CHART

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COMMERCIAL REFRIGERATION

A fire escape in another hospital, crowded with patients, nurses and others intent on observing an acrobatic exhibition in the yard below, sagged and would have fallen with its load except for the quick action of one who, sensing the danger, ordered all inside. It is a good plan for the superintendent occasionally to inspect all of the fire escapes within and without the institution so as to learn their state of repair and to ensure their safety should the frantic haste of fire panic occur.

A heavy fall of snow sometimes collapses weakened roofs. The careful superintendent remembers this possibility when there is an excessive precipitation of wet, heavy snow.

In another hospital, in the desire to furnish entertainment for patients, local regulations in regard to the employment of a fireproof booth in showing moving pictures were ignored. An electric spark igniting a coil of film caused a fire, burned several near-by patients and for a time even threatened the destruction of the building. Here no excuse of any sort can be satisfactory. The merest tyro knows of the inflammable nature of celluloid films. Use of a built-in fireproof booth with all of its safety precautions is the only wise method of showing films.

When Life Is Endangered

These are but a few of the accidents destroying property. Less devastating as to the numbers affected but none the less dramatic are accidents that threaten the life of the individual patient. A young intern walks through a neurologic ward and his gaze falls upon a patient apparently in danger of death by choking. Without hesitation he performs a tracheotomy with his own pen knife, thus saving a life. Accidents from strangulation may occur in patients suffering with disease of the larynx or from the inhalation of foreign bodies. Tracheotomy and intubation sets should be on hand in several places in the hospital. Certainly in the accident ward and possibly in the children's ward instruments for the emergency treatment of suffocation should be found.

Too commonly does one observe in the daily press the account of a jumping or a falling from a hospital window. When this occurs the superintendent should ask himself why he did not supply proper door and window protection which could be removed and replaced with little effort when a patient is observed to exhibit psychotic symptoms. Such an inquiry does not, however, restore to the family the temporarily deranged person nor does it repair the damage to the reputation of the hospital.

Some events of this type occur so rapidly that few preventive measures can be taken at the time

and only the recognition of their possibility by the detection of threatening mental symptoms will be helpful. A patient within ten yards of a trained hospital executive thrust his clenched fist through a window, secured a piece of glass and severed his jugular vein before restraining hands could be laid upon him. Another, whose suicidal tendencies should have been detected, locked himself in a ward lavatory and employed a bandage to suspend himself from a toilet stall cross-piece.

Forestalling Fire Damage

Fire is an ever present menace in a hospital and preventive measures have often been outlined. Many stretchers should be found, no locked spaces should exist without official access to keys, a well-worked out key system with a centrally placed board upon which is to be found a key for every locked space, the elimination of overheated and overcrowded storerooms, an appreciation of the danger of spontaneous combustion, and care in the storage of gas tanks are but a few of the basic precautionary measures.

Anything may occur in the hospital. A light hospital delivery truck was discharging a barrel of molasses into a freight elevator leading to a nurses' dining room. The driver started the truck and the helper fell into the elevator pit with the barrel following him. An unusual fatal accident, to be sure, but it recalls the fact that elevators, except those actually protected by a grille, should never be allowed to stand above the level of the floor. Moreover, while the danger of broken cables is always present, the defiance of certain basic elevator rules is likely to cause disaster.

Accidents in the x-ray department may be due to faulty construction or faulty manipulation of the equipment there. A patient sitting in a dental chair is brought into a high voltage circuit and electrocuted. Fortunately, modern dental x-ray equipment is shockproof in construction and the operator and the patient are both protected thereby. Burns during the course of deep therapy treatment do occur. An automatic detector showing that filters have been omitted is the device employed by some x-ray operators to prevent this accident.

Some accidents have their ludicrous angle. A temporarily mentally deranged man escaped from a medical ward, ascended to the roof of a city institution and concealed himself in the depths of a chimney. He refused to depart from his Santa Claus rôle until prodded from below. He then returned to his ward without injury to himself but only after somewhat damaging the dignity of the executive who assisted in his extraction. No one could foresee such an occurrence.

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3-YEAR SAVINGS RECORD

Montreal, Que. — Heating costs have decreased each year since 1932 as the result of a heating modernization program carried out in the Hotel Dieu de Saint Joseph Hospital, here.

In this well-known Canadian hospital, the Webster Moderator System of Steam Heating replaced a hot water system. No alterations were necessary in the main power plant, the original four boilers still being in use.

"During our first year with the new system, coal consumption was sharply reduced," H. Deschamps, the Operating Engineer, reports.

Savings were achieved despite the fact that the Webster Moderator System carried an added heating load. At the time of the modernization, one story was added to the public wards of the Hospital and a new five-story wing, 50 x 100 feet, was added to the Sisters' Residence. In addition, the main kitchens were operated 24 hours a day as against 14 hours a day in 1932.

During the 1933-34 heating season, with more experience in operation and minor adjustments in the control equipment, the Hospital made a further reduction of 114 tons of coal. During 1934-35, the third year after heating modernization, the building used 155 fewer tons of coal than during the previous season.

With coal averaging \$6.40 a ton, this saving has taken a large slice out of the Hospital overhead.

Sections of the building affected by the Webster Heating Modernization Program include the Monastery, the Sisters' Residence, all public wards of the Hospital and the main kitchens. The cold northern winter, the large amount of exposure and the necessity of meeting hospital temperature demands have increased the importance of satisfactory heating.

With the Webster Moderator System, the Hotel Dieu de Saint Joseph Hospital is comfortably heated at all times. A roof thermostat adjusts the supply of steam with every fluctuation in outside temperature. All radiators receive steam at the same time and in approximately the same amounts.

"We do not hesitate to recommend the Webster Moderator System for any buildings similar to ours," Mr. Deschamps said.

If you are interested in (1) improved heating service and (2) lower heating cost in your building, address

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PLANT OPERATION

Conducted by John R. Mannix and R. C. Buerki, M.D.

Air Conditioning and Modernization

By Sister Michaela

Superintendent, St. Vincent's Infirmary, Little Rock, Ark.

THE improvements completed within the past twelve months at St. Vincent's Infirmary, Little Rock, Ark., almost surpass belief, so many and varied are they. In one way or another the institution has been renewed from cellar to garret.

The dietetic department on the ground floor has been completely refurnished and equipped with four new ranges, an electric coffee maker, an electric meat slicer, a mixer, a cube steak machine, steam tables and an entirely modern electric dishwashing unit. A tea room for the accommodation of guests was also recently opened.

Minor injury cases are now taken to a new emergency room, near the main entrance which saves time and avoids interference with the operating

schedule of the surgical department.

Two outstanding improvements are the central supply room and the central linen supply. Both are situated near the elevator, thus facilitating the conveyance of linens to the various departments.

Nowhere has St. Vincent's Infirmary manifested so unmistakably the trend toward progress, as in the roentgenologic department. A new small shock-proof one-piece machine has been purchased for bedside use. This portable apparatus is invaluable in making examinations of patients who are too ill to be moved, or of those who are cumbered with immobilizing apparatus. It is useful, too, for examinations in the major and minor operating rooms.

The new diagnostic x-ray machine

is a high powered and entirely modern apparatus with valve-tube rectifications of the high voltage electric current. This includes a double-focus x-ray tube and a motor driven fluoroscopic tilt table, readily adjustable to the requirements of individual cases.

The deep therapy machine is noiseless, odorless, completely shockproof, and of sufficient power to administer large doses of x-rays in short periods of time. A new urologic table is fitted for making x-ray exposures during cystoscopic examinations. A Dotter-Bucky diaphragm built into the table assures the best of x-ray pictures. An automatic illuminator, for x-ray film reference, has been added to the equipment of the operating rooms.

St. Vincent's boasts the leading laboratory in the state, where blood chemical determinations are obtainable at any hour of the day or night. The pathologist is in attendance at all times and quick sections are done in every case where there is any doubt regarding the surgical diagnosis. Tissues are stained and reports rendered within a five-minute period.

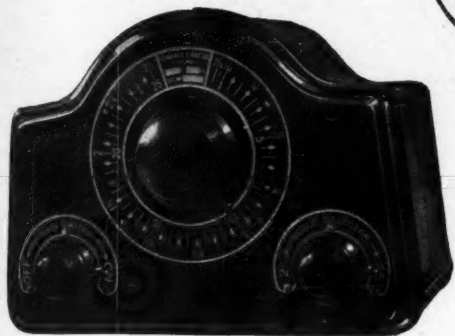
An outstanding addition to the laboratory equipment is a "B" micro projector. By use of this instrument microscopic views can be projected on the screen without the preparation of lantern slides. This makes possible practical demonstrations of microscopic pathology and it is an invaluable aid at staff meetings, intern conferences and autopsies. Two new binocular microscopes are fitted with tilted eye pieces to obviate eye strain.



The nursery is equipped with a small floor type air conditioner.

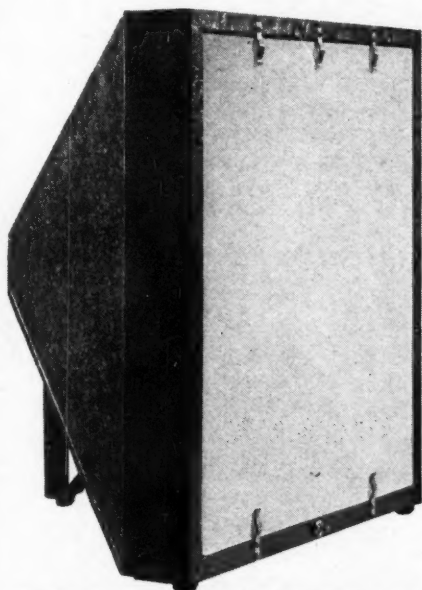
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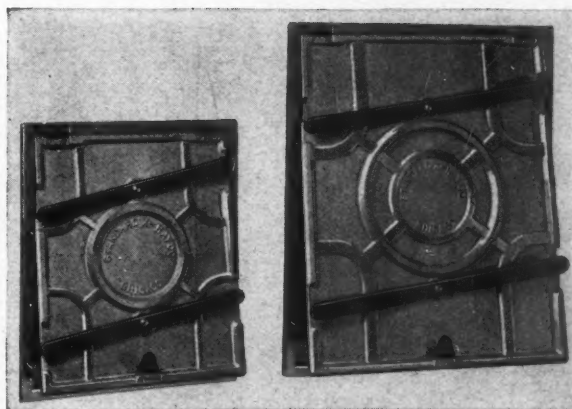
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We have distributors in all principal cities, enabling users of Standard X-Ray equipment to secure prompt service at all times.



Air conditioning and additional tables and multibeam lights have increased the comfort of patients and surgeons in the operating room.

Another modern piece of equipment is a new instrument for comparing colors and sediments. This can be used in any test where there is a sediment or color form. Its accuracy exceeds that of the colorimeter, now used.

It was with some misgivings that the administration of St. Vincent's, acting on the advice of surgeons and physicians, determined to have the surgical and obstetric departments air conditioned. Not a few objections were advanced when the plan was proposed. It was argued that both departments had been remodeled recently and fitted with every thing needed. The major operating rooms

had added tables and multibeam lights. The minor operating rooms had been equipped with new orthopedic and urologic tables, as well as sundry smaller tables and cabinets. The obstetric department had been enlarged and refurnished. A delivery table, infant respirator, incubator and oxygen therapy unit had been recently acquired, while the private rooms had been fitted up with all the comforts of a home. What could air conditioning offer that would add further to the service to patients?

Experts were summoned. St. Vincent's was soon persuaded that there was a degree of efficiency to which

the infirmary had not attained. Not to go forward is to go back, so plans were perfected and the work was begun. Some little discomfort was occasioned by the demolition and construction, unavoidable during the period of installation. Quite a few doubts were expressed concerning the feasibility of installing a new apparatus in an old building. The work proceeded steadily, however, and after days of unremitting labor, the last screw was adjusted, the signal was given, and presto! the two departments were air conditioned. St. Vincent's waited for reactions.

By good fortune the weather was extremely hot on the day the machinery was first set in motion. The fall in temperature was noticeable even to those who were not cognizant of the cause. Many favorable comments were made, particularly by doctors and patients. Visitors, on being admitted to the obstetric department, remarked the delightful coolness prevalent everywhere. It was apparent that everyone was pleased, thus far, with results. Time would tell whether these results would remain satisfactory and permanent.


Weeks passed and no adverse criticism was reported. Then one very warm day complaint was registered in the office that the air conditioning system had ceased to function. The chief engineer was summoned and a hasty investigation revealed the fact that a defective pipe in another department was the source of trouble. Response was prompt when the installing company's expert was appealed to. Within an incredibly short space of time all was in working order again. Comfort and peace were restored. Surely this was the propitious moment for eliciting criticism, favorable or unfavorable, regarding the air cooling system recently installed at St. Vincent's.

The nursery was visited first. This room is equipped with a small floor type air conditioner, since a slightly higher temperature is required for the infants. All the little ones were sleeping quietly or in other ways signifying that they were in normal condition. Two premature babies were resting comfortably in their incubators. Two pairs of twins appeared to be wholly content with their environment. The charts showed all to be in perfect health, even those who had started life at a disadvantage, as was the case with those prematurely delivered. Not one case of pneumonia has been recorded this year.

An individual control in each private room provides for a change of temperature when a patient's condition requires the adjustment. All the mothers expressed themselves in favor of air cooled rooms. One lady, who had sent immediately for an electric fan, when the system had ceased to function, declared in emphatic terms



One of the outstanding improvements in the central supply room.



Here's Tactility Motility Economy

YOU BUY these three things when you buy Seamless Standard Surgeons' Gloves for the staff. They have bare-hand cutaneous sense, for the gloves are tissue-thin. Touch is keen. Then, too, they have accurate fit—the gloves seem molded to the hands. Movement is free and unhindered.

And as the staff uses them time and time again, you'll discover something else. Their longevity! They keep coming back from the sterilizer alive and elastic long after similar gloves would have wilted.

So thin, so comfortable, so steadfast, these gloves prove a welcome economy. Your supply house can furnish you with Seamless Standard Surgeons' Gloves. Specify them the next time you order. There are two types: Latex, no finer at any price, and Brown-milled, peerless at their price.



All Seamless Standard Surgeons' Gloves are identified by this characteristic seal which appears on the wrist of the glove and on the box.



More than 100,000 Physicians and Surgeons see this advertising every month in the Journal of the American Medical Association, Surgery, Gynecology & Obstetrics, American Journal of Surgery and Annals of Surgery.



An individual control in each private room provides for a change of temperature when the patient needs this. Left, a corner of the supply room.

were unstinted in their praise. Said one, "There is no doubt in my mind that an air conditioned operating room is best for the patient. For the past fifteen years I have had many postoperative heat prostrations, during the summer months. This year I have not had one. This I attribute to the air conditioning of the surgical department. Nor have I had one pneumonia case. This proves that the change of temperature does not affect the patients detrimentally. There is no question regarding the comfort of the operating surgeon."

"I am 110 per cent in favor of air conditioning at the infirmary," remarked another. "There are more reasons than one for this statement. A patient who has lost fluid, through excessive perspiration, requires a greater amount of anesthetic. Then, too, the danger of infection is decreased, if the temperature be kept uniform. However, there are fewer institutional infections at St. Vincent's than at any hospital in which I have served. But I mention this feature of air cooled rooms because I believe it is an item worthy of consideration. As regards the objection that there is involved a risk in moving a patient into an air conditioned department, it is my conviction that the risk is negligible." All the surgeons and physicians expressed practically the same opinion.

The total cost of the air conditioning equipment was just over \$8,000. It maintains a humidity of 50 to 55 per cent with summer temperatures of 78° to 80° F. and winter temperature of 80° F. The monthly operating cost during the summer months is \$45 to \$50.

that air conditioning is a godsend in a maternity department. Another patient, whose life had been despaired of by reason of her condition on entrance, voiced the conviction that her steady improvement was due in great part to the uniform temperature of the room. But what said the physicians and surgeons?

"It is an established fact that air conditioned rooms are wholly favorable to the patients' health and comfort," declared a leading obstetrician. "Uniform temperature is an important factor in maintaining peace of mind, with consequent decreased expenditure of nervous energy. The milk secretion is increased, too, and the flow is more copious after a quiet night spent in such an environment. As far as I can determine, there is every advantage in air conditioning the department."

The surgeons, on being questioned,

THE HOUSEKEEPER'S CORNER

• Hospital housekeepers in different sections of the country turned out in full force to greet Mrs. Grace Brigham, president of the National Executive Housekeepers Association, during her recent tour. Noticed among her various audiences were Mary Hayes of the Medical and Surgical Hospital, San Antonio, Tex., and Mrs. Mae S. Roberts of the Baylor University Hospital, Dallas, Tex. Mrs. Roberts, incidentally, is one of the board of directors of the newly formed chapter in that city. The meeting in Minneapolis held at the Radisson Hotel was particularly successful, hospitals being well represented by Erna Guttlerof of the Eitel Hospital, Mrs. Johanna Hansen of the Asbury Hospital, Mrs. Rose M. Haynes of St. Barnabas Hospital and Anna Saxum of the Abbott Hospital. In Rochester, Minn., a new member, Mrs. Martha Wade Hopkin, Colonial Hospital, was welcomed.

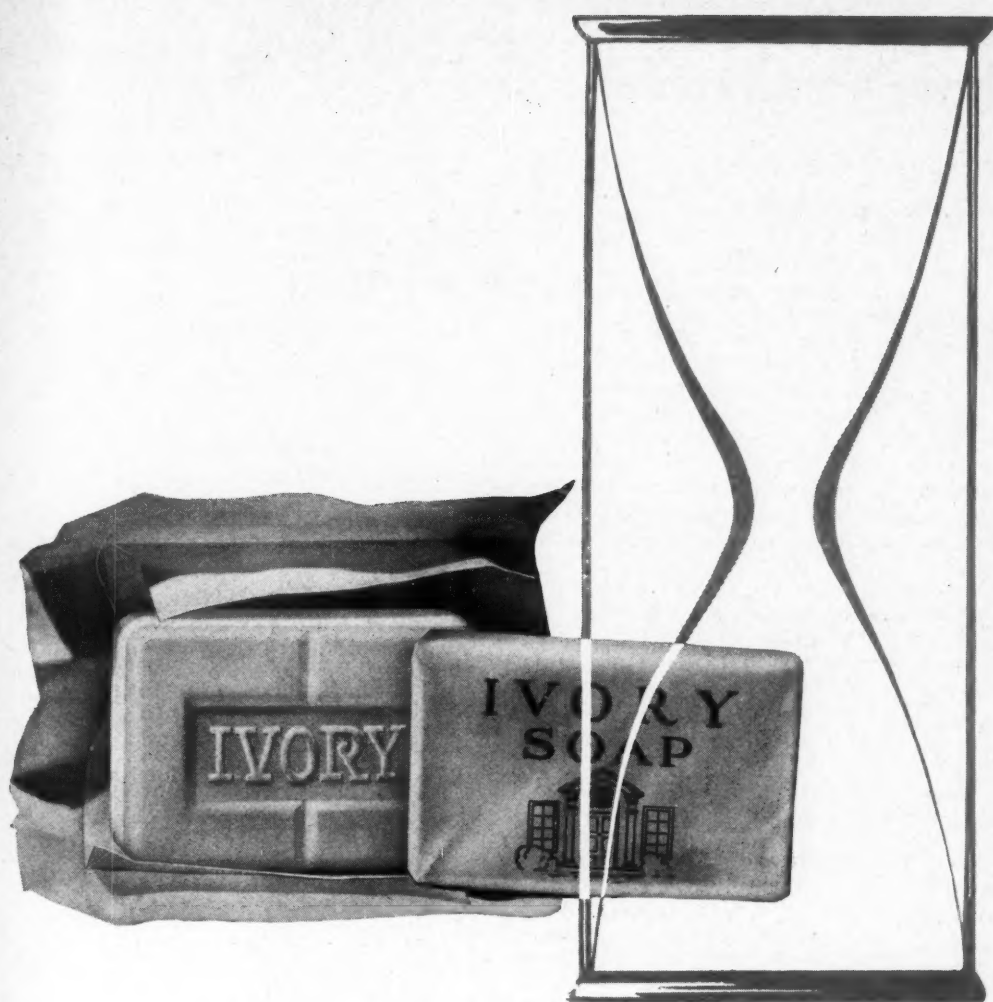
• The Chicago chapter of the N. E. H. A. is sponsoring an informal school for housekeepers. Meetings are held monthly for ten months. A small charge is made to cover expenses. At the February meeting Richard P. Murray of the Kenwood Woolens, Inc., Chicago, spoke on the subject of woolens and blankets. Other topics to be covered in forthcoming classes are wall coverings, textiles, mattresses and beds.

• A large attendance is expected at the annual convention of the National Executive Housekeepers Association to be held at the Stevens Hotel, Chicago, May 15, 16 and 17. Many representative hospital housekeepers from the East plan to be present.

• The name of a new secretary appears on notices coming from the headquarters of the Philadelphia Chapter of the National Executive Housekeepers Association. Anna Walden who previously held this post, has resigned and her place has been filled by C. Muriel White.

• "Every job has certain mental requirements," according to Dr. Mary deGarmo Bryan, head of Institution Management, Teachers College, Columbia University. "People who are too smart for jobs are fretted at being held down. There are many jobs that can be done very well by people who are not smart. People who are too dumb for their jobs are unhappy too."

• Hospital housekeepers of Wisconsin held a dinner meeting at Milwaukee on February 22 to discuss plans for the housekeeping section of the Tri-State Hospital Assembly to be held May 6 to 8 at the Hotel Sherman, Chicago. Mrs. Alta La Belle, housekeeper, Michael Reese Hospital, Chicago, addressed the group.



On duty • for 57 years • • You'll agree that soap has but one duty to perform in patient care—to cleanse the skin thoroughly, agreeably and safely. For 57 years Ivory Soap has performed this duty faithfully. Careful selection of raw materials and skilful blending make Ivory as pure as soap can be made. Ivory contains no free alkali or irritating free fatty acids. It has no coloring or perfume to offend. Of all the soaps available for hospital use, Ivory alone can offer you this assurance in such full measure. Your patients will thank you for Ivory protection.

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For patients and personnel, pure, gentle, rich lathering Ivory Soap is available in six individual service sizes—wrapped or unwrapped. Cakes weigh from $\frac{1}{2}$ ounce to 3 ounces. In addition there are the familiar 6 ounce and 10 ounce sizes for general institutional use.

Overcoming the Ant Problem

By Joseph Laferriere

Consulting Entomologist, Boston

ALTHOUGH house ants may present many a difficult problem, their control is simple enough. Fortunately, ants are not repelled by arsenic and furthermore are betrayed by their intense love of sweets. The two or three species that do not care for a sweet bait are strongly attracted to meat or fat. The tiny thief ant is said not to eat sugar while the little red ant will attack a ham bone as quickly as a syrup and feed upon it for weeks. If the sweet bait is not touched, it can be replaced by poisoned lard.

Most of the house dwelling and lawn dwelling ants are fond of syrup and their main food is honey-dew. Syrup bait is discovered within an hour, and the good news broadcast to all the colonies in the place. Soon there is a line of foragers coming to the bait, and another line is returning to the nest, with each ant carrying a good cropful of poison. Carpenter ants sleep during the day but most of the other house ants forage both day and night.

They're Always Hungry

The weakest point in their defense is this intense and continual hunger. *Rouches* eat little because they feed only themselves; but ants are always hungry because they eat for a ravenous brood, for the helpless ant maggot must be fed until it pupates. Thus the poisoned syrup is spread to every member of the colony and then, strange to say, it is exchanged many times. Mutual regurgitation goes on continually, because ants find pleasure in retasting the juices. According to Wheeler, the physiologic process of swallowing and regurgitating is interrupted only by social work, rest, and warfare.

Sometimes it is not even necessary to poison the bait. If a saucer of syrup is set out, a line of foragers will form and will lead directly to the nest and the whole colony can be destroyed at once. The nests should always be located. An easier method for finding them, described by Herrick, is to bait the ants with farina or cream of wheat, and follow the foragers with their white loads. The nests may be inside a building or in the lawn. In the former case, they can often be completely destroyed with an insect spray; in the latter, the nests are usually so small that they can be dug up and drenched with kerosene. In many cases the ants issue from a crevice, and when this occurs syrup

is the only cure. The same is true when there are too many ants in the building.

Two kinds of arsenic baits have been found necessary—a mild one for the Argentine ant and a strong one for other species. Both syrups are sold in drug stores. The mild syrup is well known throughout the whole range of the Argentine ant in the South. At first it was set out in small baking powder tins with the tops bent in under the covers to give entrance to the ants. Now small paraffined cups with perforations below the rims are commonly used in great cooperative campaigns. Except when honey-dew is abundant, the syrup is attractive to the ants at all times. In a house job, the cups should be exposed not only in the dwelling but also on the posts of the porch and the trees of the lawn, to attract the ants out of the house.

The strong syrup, which is employed against other ants, has for ingredients: 2 ounces of white arsenic, 1 ounce of concentrated lye, 1 pound of sugar, and 1 pint of water.

Another formula calls for 1 pound of sugar, 1 pint of water, 125 grains of arsenate of soda, and 1 tablespoon of honey. The sugar, water, and arsenic are boiled until the arsenic is thoroughly dissolved, then the honey is added.

Zappe applied the last formula in a typical exterminating job, a house in Hartford, Conn., which had been troubled for several years with little red ants. No serious annoyance had been caused until in 1916 they began to overrun every room in the house, and were especially fond of the bathroom where they could be seen drinking water. Syrup was placed in small shallow dishes, and soon the ants began to feed. Foragers were seen car-

Their civilization is interesting, their contributions to philosophy have been numerous, but in a house they are just so much trouble. In his third article Doctor Laferriere discusses the elimination of house ants

rying the bait back to the nest and even the queens came to the feast. The syrup seemed too thick, so in another batch, only one-half pound of sugar was used. The experiment began on December first and by December eighteenth there were no more ants in the first and second floors, and only a few living ones were found in the third.

According to more recent investigations, thallium sulphate is thought more effective than arsenic in the control of the red or Pharaoh's ant. The formula is simple: 1 pint of water, 1 pound of sugar, 27 grains of thallium sulphate and 3 ounces of honey. The whole should be brought to a boil, mixed thoroughly and allowed to cool. With this, the little red ant has been exterminated in from three weeks to one month.

The action of these cumulative poisons of arsenic and thallium is slow, in order to give the ants a chance to poison the whole nest. The effects are soon visible by the number of dead queens, larvae, and workers that are discarded. So long as the foragers continue to feed, extermination is being effected. In one colony of the Pharaoh's ant, Bellevoye counted 350,000 workers, with more emerging from the crack! It takes time to destroy such a nest. As many as 200 queens were found in one fornicary of the odorous ant; every one of these egg laying machines must be killed to destroy the pest.

Thallium sulphate is a dangerous and insidious poison, and the exterminator should be careful not to breathe the fumes. With this exception, thallium can be safely used.

An Easily Made Trap

Arsenic and thallium syrups should be exposed in closed containers to protect household pets. An ordinary spice tin, with two or three perforations, is often used. A simple and effective ant trap, devised by Cotton and Ellington in 1930 is made from an ordinary pill box. The interior is washed with a solution of melted paraffin, to make it watertight. Four sections of cardboard are cut off the inner circular collar, over which the cap of the box fits, and when the container is in use, the cover is only opened far enough to expose the four small openings for the entrance of ants. When not in use, the cover may be closed. The boxes should be about three-quarters full of small pieces of blotting paper or small sponges on which the syrup is poured. In a few hours these will be covered with ants.

Since the idea is to kill the ants and not to chase them away, it is a loss of time to use repellents. None of these are strong enough to keep ants from food supplies. Camphor and naphthalene bring only comparatively little benefit. However, if a repellent

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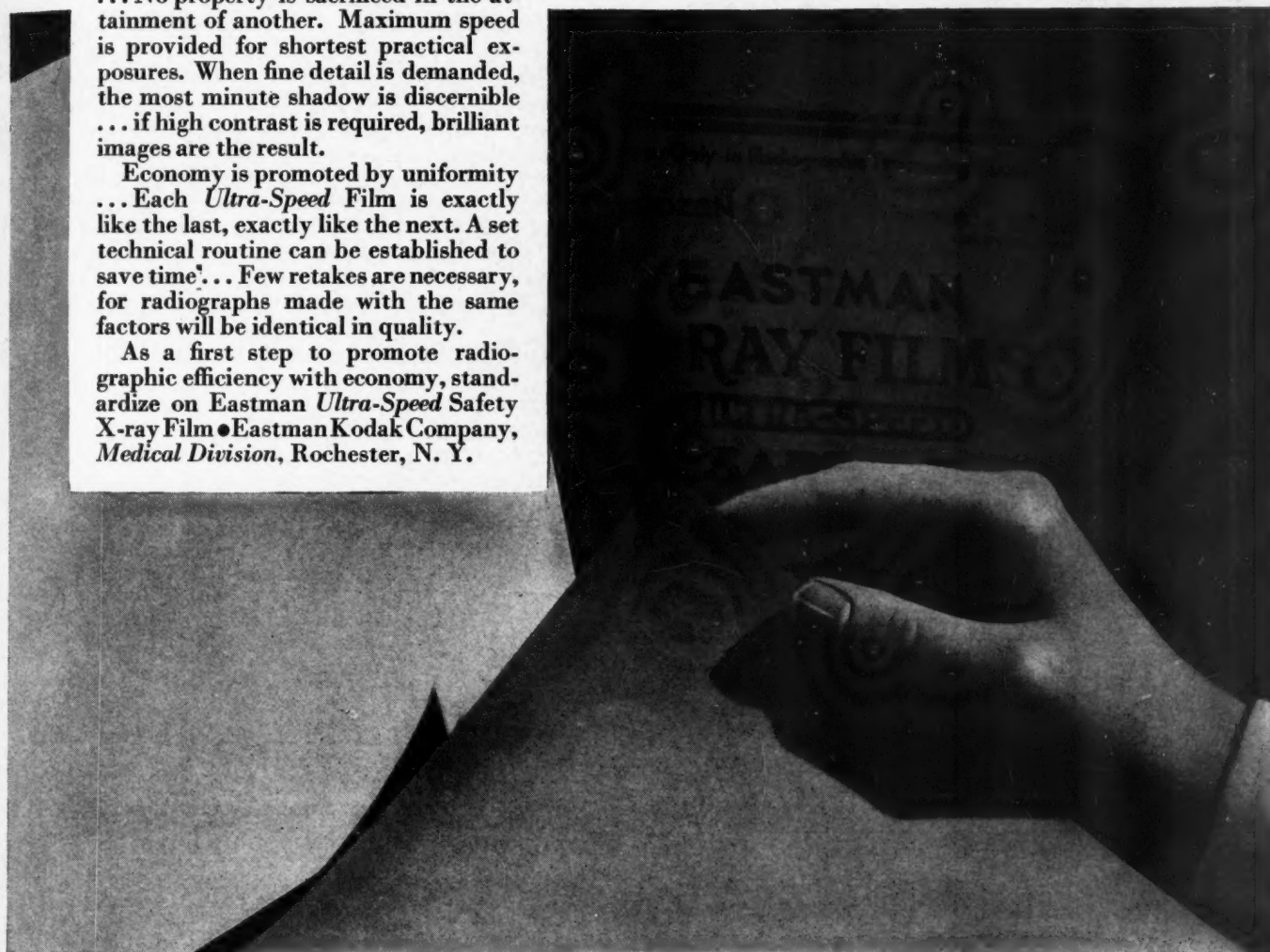
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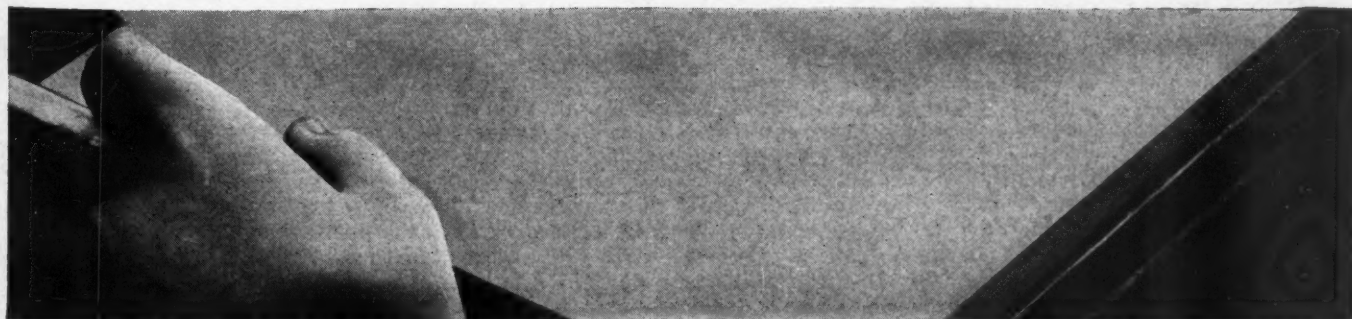
All technical requisites are carefully balanced in Eastman *Ultra-Speed* Film ... No property is sacrificed in the attainment of another. Maximum speed is provided for shortest practical exposures. When fine detail is demanded, the most minute shadow is discernible ... if high contrast is required, brilliant images are the result.

Economy is promoted by uniformity ... Each *Ultra-Speed* Film is exactly like the last, exactly like the next. A set technical routine can be established to save time ... Few retakes are necessary, for radiographs made with the same factors will be identical in quality.

As a first step to promote radiographic efficiency with economy, standardize on Eastman *Ultra-Speed* Safety X-ray Film • Eastman Kodak Company, Medical Division, Rochester, N. Y.



Eastman *Ultra-Speed* Safety X-ray Film



becomes necessary because ants are continually coming in from an infested block Horton recommends the following mixture: 20 grams of corrosive sublimate, 60 c.c. of ethyl alcohol, and 31 grams of shellac. The corrosive sublimate is dissolved in the alcohol, the shellac is added and the mixture shaken until all is dissolved. This can be painted in bands of 6 to 8 inches on the legs of tables, refrigerators and other objects where food is kept. Care must be taken that the solution does not get into the eyes or in a cut. After the paint has dried it is perfectly safe, for the particles of corrosive sublimate will not fall off. This mixture keeps ants away for a year, though it will not keep its strength long when applied to a metal surface, and is more satisfactory than ant tapes, made from lamp wicks dipped in a solution of corrosive sublimate.

Theoretically, sodium fluoride should be more effective on ants than on roaches, because the former have the cleaning-up habit more strongly developed. Mould grows on the skin of ants in their subterranean life, and as a result they spend a good part of their time in cleaning themselves as all myrmecologists have observed. There is the social toilet, the friendly office of cleansing exchanged with other workers, and the continual bathing and scrubbing of the larvae, queens, and drones. At any moment of the day, two ants may be seen engaged in mutual cleansing, and a third may join in to help. Sometimes the whole colony begins a general wash-up. In these operations, the infrabuccal crop serves as a receptacle for

dirt, which is sucked dry and cast out as a pellet. It follows that if the ant could get well caked with the powder, it would soon absorb a deadly dose.

Unfortunately, most house ants are too tiny to pick up much of the fluoride. However, Clarke in 1922 had great success with sodium fluoride in a bad infestation of *Monomorium destructor* on shipboard. He evolved a nonabsorbent, nonirritating and odorless powder made with 6 parts of sodium fluoride, 2 parts of powdered Pyrethrum stems and flowers, and 2 parts of cornstarch. This was dusted freely in passengers' rooms and even in beds—wherever the ants were passing. They died in 20 to 30 seconds and the larvae and queens soon began to starve. In a few days the ants were under control.

Gibson, in 1916, was the first to apply sodium fluoride to a larger species, the half-inch carpenter ant, which had invaded the kitchen of his summer home. By dusting the powder between the beam and the roof, which was their entrance, he cleaned them out almost completely with two applications. The powder was used in other houses of the vicinity with equal success. One application was enough to kill countless acrobat ants that infested an outside kitchen. The powder was dusted between the beams and the roof and over the shelves. Another application on the floor below a door leading to an outside gallery cleared out a bad invasion of carpenter ants. Sodium fluoride is worth trying in any infestation, except perhaps when the ants are too small. It should be dusted as near as possible to the point of entrance to be most effective.

This information is available to the hospital through the salesmen. Representatives of most responsible firms are prepared or equipped to bring to the hospital much of value, not only from their own experience, but from that gained through intimate contact with hospital executives. They are familiar with many problems affecting hospitals and know they have been solved in this or that institution. Frequently their opinion is solicited in the solving of some problem, on which their particular training has some bearing.

How Do You Buy?

Some buyers exhibit definite shortcomings in their dealings with commercial representatives, the most common being that they are too busy to grant an interview or that they know their requirements and the proper source of supply. One of the first principles of good purchasing is to know your requirements, but how can this be done without some knowledge of world market conditions, the unusual local condition that affects this or that commodity, the latest improvement on a certain piece of equipment, or the new item that has just appeared on the market? Any of these may affect your budget adversely. This and similar information is usually obtainable from the salesman.

The practice of not interviewing trade representatives will be reflected either in the cost of the hospital's purchases or in its lack of modern equipment. I ask no consideration for the high pressure salesman who is going to sell you whether or not, nor for the "carpet bagger" who makes a trip with an advantageous sounding offer but rarely calls a second time. The price cutter, who offers appealing bargains to get his goods introduced into the institution, will rarely maintain either his price or the quality of his goods once he thinks he has a foothold on the institution's business.

Every manufacturer is entitled to a reasonable margin of profit on his merchandise. A concern that persistently attempts to supply merchandise at a price less than that which will allow a legitimate profit usually ends up handling "bargain goods" or in bankruptcy. A guarantee or warranty of goods is only as valuable as the integrity of the concern giving it, hence business dealings should be confined to responsible business concerns.

The type of salesman commended represents a firm whose one desire is to serve you. His efforts tend to cement that dignified business relationship so necessary between the hospital and the organization he represents, if business dealings are to be mutually beneficial. He will not only jealously respect the confidence placed in him but will also protect the interests of the hospital and his firm.

The Salesman Calls

By S. T. Martin

Toronto

WHERE does the hospital buyer acquire his varied and detailed knowledge of instruments, medicines, anesthetics, linens, foods and the hundred and one other articles that he must purchase every year? His greatest resource is contacts made with salesmen of established, responsible firms, who solicit the hospital's business. These men are trained and know more about their individual lines than is possible for most hospital administrators.

Our hospitals use practically every commodity that enters into our economic life and the superintendent, who may possess considerable general knowledge but cannot possibly be an authority on so many diverse items, must necessarily depend upon the in-

tegrity of the firms from which he makes his purchase.

Efficiently operated hospitals have budgets, estimated revenues and expenditures and a scale of charges. This is a truly businesslike procedure. The annual operating cost of the hospitals on this continent approximate nine hundred million dollars. Half of this constitutes expenditures other than salaries. If hospitals are to realize the greatest value for this vast expenditure, there should exist a cordial but dignified relationship between them and the firms receiving this vast sum.

Most substantial firms give much thought and study to the relationship of their particular products to the fundamental purpose of the hospital.

Your patients will
Enjoy
Reducing with Menus
such as these

A complete program of Low Calorie Menus for One Week has been planned by a well-known dietitian. A typical luncheon is illustrated. Copies of these menus for your own use are available upon request. Simply use the coupon below.



There's no need to tell you how much appetite-appeal influences the success of any diet. Patients naturally adhere more closely to a program they enjoy.

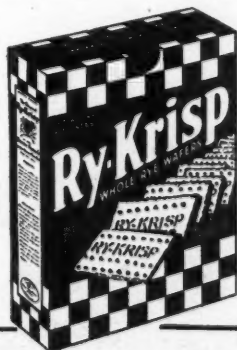
Therefore, Ry-Krisp, because it is both a delicious food and an effective aid to reducing, serves an important double purpose in moderate reducing diets. Because it is simply flaked whole rye, salt and water, double baked, Ry-Krisp provides bulk to give a sense of repletion with relatively low caloric intake. With only 20 calories each, a wafer can absorb five times its

own weight in water. Moreover, due to its high pentosan and fiber content, 12% of the total carbohydrates in Ry-Krisp are not assimilable.

Remember, too, that because it tastes so good, Ry-Krisp makes it easier for the patient to forego other foods you may prohibit. Its crispness and unique whole rye flavor make it perfect as crackers, toast or bread at any meal. For free samples of Ry-Krisp, the Research Laboratory Report and the Low Calorie Menus for One Week offered above, use the coupon.



It takes three RY-KRISP Wafers to equal a single slice of bread in caloric value.



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WHOLE RYE WAFERS

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Please send me, without obligation, samples of Ry-Krisp, a copy of the Research Laboratory Report, and the Low Calorie Menus for One Week:

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Conducted by Anna E. Boller, Rush Medical College

An Architect Plans a Hospital Kitchen

By H. Eldridge Hannaford, A. I. A.

Samuel Hannaford & Sons, Architects, Cincinnati

IN PLANNING the dietary department and its facilities, certain basic objectives must be recognized. Food must be nutritious, palatable and served promptly in perfect condition. The dietary department must be arranged to permit efficient supervision and operation. Special diets must be handled under a system of direct responsibility for results that offers an effective medium for carrying out special instructions from the medical staff.

The dietary department must be economical in its equipment investment and in the space it occupies, with both of these designed for the operating system and personnel under which it will function. Every provision must be made for sanitation, sterilization and mechanical efficiency, as well as for any special factors affecting food service operation.

There are three general classes of food service systems. In the first,

food is prepared in the main kitchen and served in bulk to the floor service kitchens. Here it is put in steam tables and trays are made up and served. Sometimes each floor service kitchen has its own dishwashing and dish storage space. This is a decentralized system adapted to large institutions.

In the second system food is prepared and trays are made up in the main kitchen and then transported to floor distribution pantries for service to the patients. This is a centralized system and is used in the majority of plans. The third system is substantially the same as the second except that here all food is served directly from the central kitchen, requiring special organization and transportation and practically eliminating floor service rooms. This is a highly centralized service.

Each system has its merits and drawbacks and is largely dependent upon the plan and size of the hospital

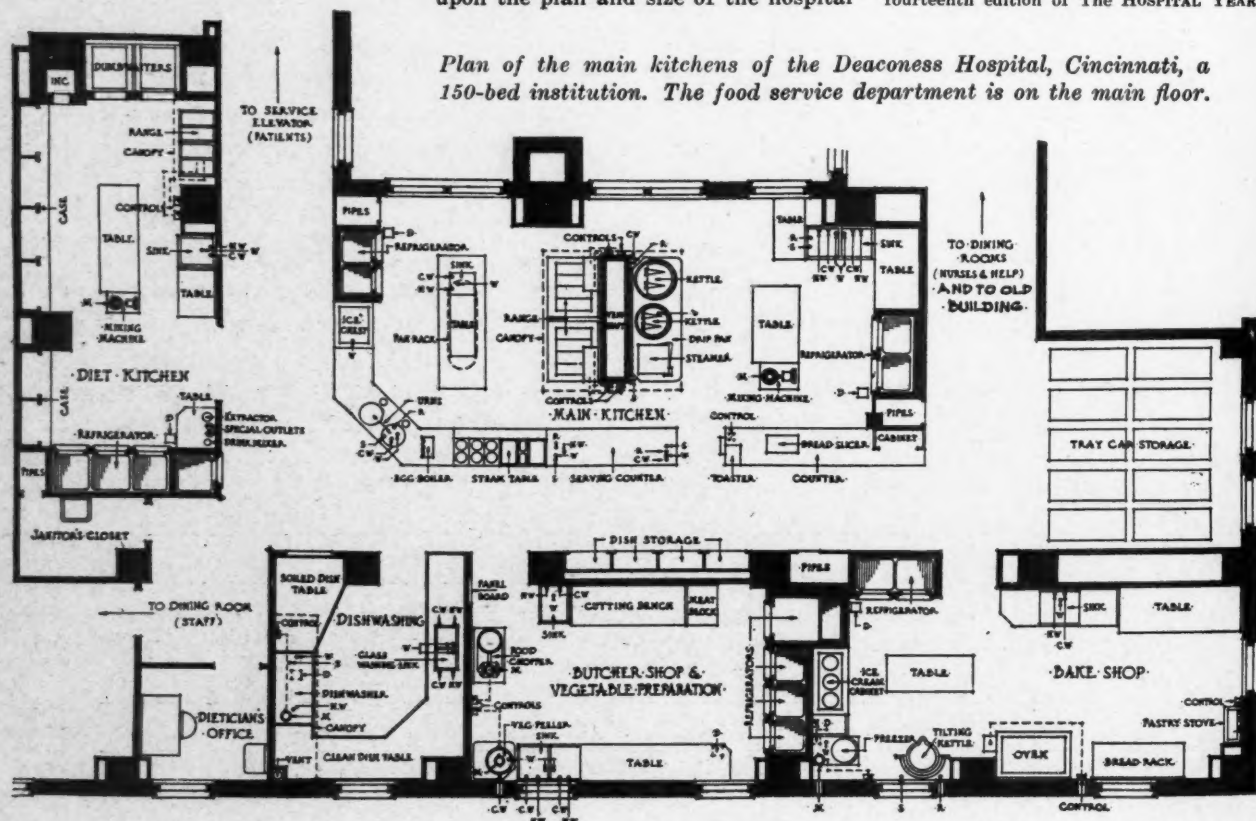
for its success. The whole subject is too controversial to be discussed here except to point out that the system selected will affect the planning of the dietary department to a marked degree and it is therefore of primary importance to establish the food service system before detailed planning is attempted.

To determine the area requirement of a hospital kitchen is not a simple matter. There is no positive rule that can be used here; even kitchen layouts cannot be planned according to any single fixed method. Local conditions, individual policies and other special factors prevent kitchen planning from becoming a matter of routine.

The best rough proportion for determining kitchen area is in terms of "square feet per bed." An analysis of the space given to food service in twenty-three typical hospitals and institutions in the United States and Canada shows that the kitchen area per bed may vary from 9 to 10 square feet to 33 or 34 square feet.¹ There is a similar variation in the sizes of floor pantries and personnel dining rooms, the area per bed of the latter varying from 6 to 18 square feet.

This wide variation does not imply a difference in planning technique or ability; it is simply due to such varied conditions as the different methods of serving operations; the omission of bakery or ice cream departments due to local conditions; the addition of milk laboratories or other specialized sections; special problems arising in tuberculosis sanatoriums and children's hospitals; the inclusion of patients' dining rooms in convalescent,

¹This analysis is printed on page 206 of the fourteenth edition of *The HOSPITAL YEARBOOK*.

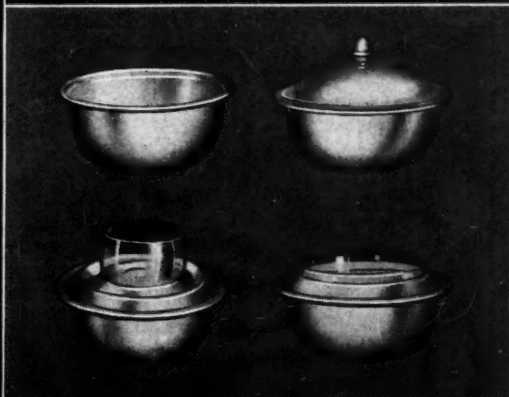
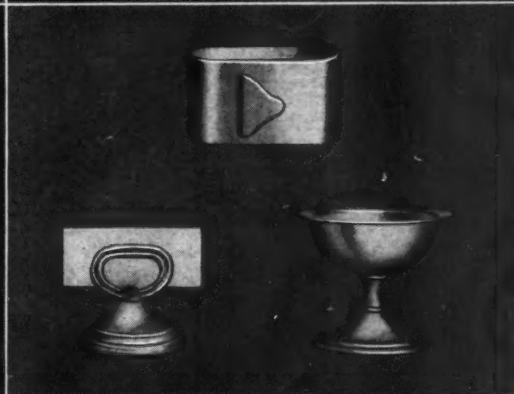


Plan of the main kitchens of the Deaconess Hospital, Cincinnati, a 150-bed institution. The food service department is on the main floor.

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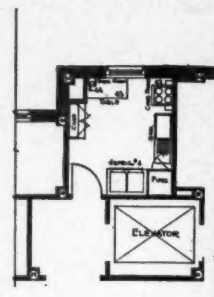
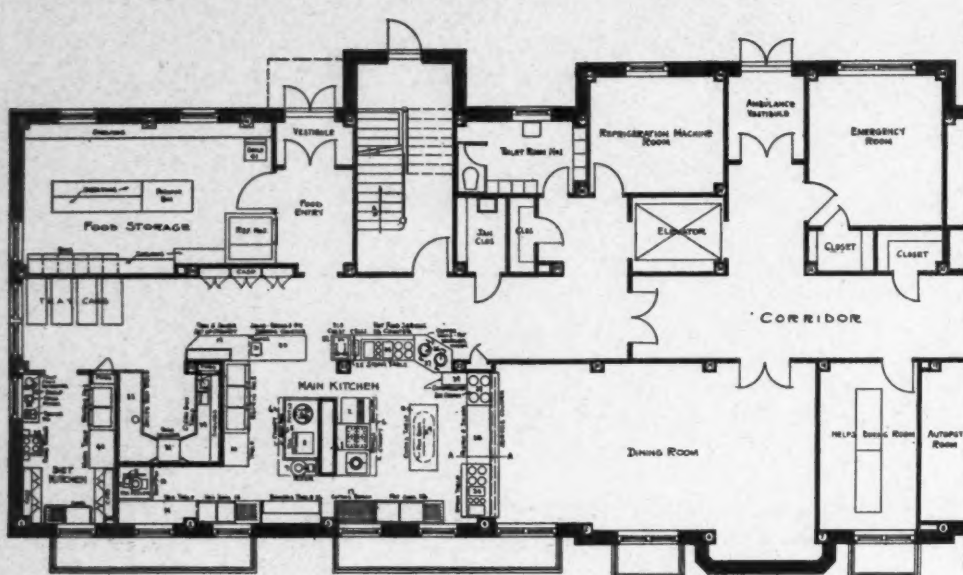
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Left, a plan of the kitchens, storerooms and dining rooms of the Marietta Hospital, Marietta, Ohio, a fifty-bed hospital; above typical plan of floor distribution pantry.

tuberculosis or mental disease hospitals; the variation in number of the personnel served; the shape and height of the building, and the method of food transportation.

As a starting basis it is suggested that 18 to 20 square feet per bed be assumed for an initial assignment of kitchen area.

The kitchen should be located so as to permit the quickest distribution of food by the most direct route with the least complicated operation. This means that it should be near the center of the building and adjoin the service elevator unless special dumb-waiter transportation is provided. It should be conveniently located for service to the personnel dining rooms and isolated from other departments insofar as possible.

Factors Influencing Location

The service entrance to the hospital and the facilities for receiving and storing supplies and for garbage removal should be considered as part of the kitchen department. Such a group arrangement will prove efficient and highly economical in operation.

Unless a basement is only 50 per cent or less in height below ground it should not be used for a kitchen for natural light and ventilation are important in this department.

Floor service pantries or distribution kitchens, if used, should be central to the floor areas and in direct vertical communication with the serving section of the main kitchen. The size of these rooms will vary with the food distribution system used. If food is served in bulk from the main kitchen and trays are set up in the floor kitchen, the area required will be from 300 to 350 square feet, but if they are used merely as a receiving or relaying point for trays already set up, 150 square feet will usually prove sufficient.

The dining rooms for the hospital

personnel should be readily accessible to the kitchen for ease in serving. The number of dining rooms will vary according to the size of the institution and the classification of its personnel. Separate dining rooms for graduate and student nurses, interns and staff members, office and administrative personnel, white and colored help, and, in Catholic institutions, special dining rooms for Brothers or Sisters, visitors, chaplains or other special classes may be desired.

All these factors definitely influence the location, area and equipment requirements of the kitchen.

Cafeteria service has proved economical and for the most part satisfactory. The location of dining rooms with this in mind, in reference to the serving section of the main kitchen, should be striven for.

The allowance of about 12 square feet per seat, exclusive of counter and pantry area, or 15 square feet per seat including counter and pantry should produce a properly sized dining room.

The kitchen does not represent a single operating department but is composed of a number of units variously combined into a general scheme.

Dovetailing Entrances and Exits

The good kitchen plan takes into consideration such factors as receiving, storing and controlling food and supplies; food preparation and cooking; food service to patients; special food and diet preparation; feeding of hospital personnel; labor efficiency, organization and supervision; cleaning, handling and storing of dishes and utensils; methods of food conveyance; application of fuel, power and refrigeration; steam and water supply; drainage; ventilation; lighting; heat insulation; size and location of flues; special construction promoting sanitation, and floor and wall treatments.

The proper grouping of these fac-

tors so as to facilitate the flow of supplies into the kitchen and of prepared food out of it is a job requiring the best efforts of any person, no matter how expert. The necessary facilities must be fitted into the building plan so that entrances, exits and elevators properly dovetail with the equipment layout and mechanical and structural requirements.

The various subdivisions of the department group themselves in accordance with successive operations as (1) entrance of raw products, (2) food preparation and cooking, (3) food service to patients and personnel, (4) return and washing of soiled dishes, (5) disposal of garbage. The more accurately the layout corresponds to and facilitates these progressive operations, the more efficient the kitchen will be.

The plans submitted exemplify two problems and show how various conditions were met.

General Equipment Requirements

To lay down standardized setups regarding the amount of equipment required for institutions of varying sizes is worse than folly. A careful listing of equipment requirements should be made for each individual kitchen after its needs have been predetermined. Only the most general mention of equipment items follows:

1. Food Storage Section: scale; shelving; bins; barrel racks; section for tuber storage; large storage refrigerators with separate compartments for meat, poultry, fruit and vegetables, and dairy products; separate box for fish and other types of sea food.

2. Food Preparation Section: work counters and tables; meat block; meat sinks; vegetable peeler and drip pan; vegetable sinks; salad preparation counter and sinks; mixer; food chopper; cook's refrigerator; salad refrigerator.



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3. Cooking Section: ranges; broilers; soup kettles; cereal cooker; vegetable steamers; mixer; cook's table and sink; bain-marie.

4. Bakery Section: work counters and tables; sinks; dough mixers; large oven; proof oven; pantry oven; pastry kettle.

5. Special Diet Section: range; refrigerator; mixer; fruit juice extractor; milk pasteurizer (if needed); work counters; tables; sinks; bain-marie.

6. Service Section: cold service counter; steam table and hot service counter; cafeteria counter; coffee urns; tea and milk dispensers; toaster; egg boiler; ice cream cabinet; food trucks and tray cars with parking space near by.

7. Dishwashing Section: dirty dish counter with scrap hole and garbage receiver; dishwasher; clean dish counters and shelving; glass sinks and counters; silver washers; burnishers.

8. Dish Storage Section: bodies of serving counters, shelving and cases, as needed to store chinaware, glasses, silverware, trays.

9. Miscellaneous Equipment: ice cream machine; ice cuber; ice crusher; water coolers; tray tables; napkin and silver boxes.

The foregoing list is merely suggestive. Careful study and close cooperation on the part of hospital administrator, dietitian, architect and kitchen equipment engineer will determine the exact amount, capacities and arrangement of the equipment required for optimum results.

Selecting Storage Refrigerators

Large, walk-in storage refrigerators of the built-in type with sufficient capacity for about a week's supply of food are advisable. Boxes should be subdivided into sections (usually running different temperatures) for meat, poultry, dairy products, fruit and vegetables. Small refrigerators may be built-in or stock portable in type.

Refrigerators should be checked not only for interior arrangements that facilitate food handling and storage, but for proper air circulation, cooling efficiency and the effectiveness of insulation. The insulation efficiency of any material depends upon the amount of heat entry through the material per hour, per degree of difference between inside and outside temperatures, and not on the thickness of the insulating materials, except when a single insulating material is being considered.

Steam demands should be accurately figured from a definite kitchen scheme, but for rough calculations for a kitchen load, the following may be assumed: one 30-gallon jacketed kettle; one 30-gallon coffee urn; 70 feet of enclosed or open $\frac{3}{4}$ -inch pipe, or one open jet as used in sectional steamers are each approximately equivalent to one horse power. The

minimum steam pressure at each fixture is 25 pounds although 35 to 40 pounds is preferable.

A plentiful supply of hot water is vital and lines should be sufficiently large to assure an abundant quantity. Water temperatures should not be less than 180° F. in the kitchen.

The entire kitchen drainage system should be run through a grease trap before it enters the main sewer. Individual water cooled grease traps should be provided for pot sinks and dishwashers. The drain handling water from vegetable peelers should be sharply pitched and have a short run to the main sewer to avoid any clogging of branch connection as a result of the sediment contained in the water.

Steam kettles and steamers should be placed in a drip pan provided with a waste connection at its center or end. Water connections to soup kettles and water supply at ranges for the convenient filling of pots should be provided.

Vents from kettles and steamers

should, if possible, be connected with a separate flue leading out of the building and should have a bleeder pipe at the lowest point of the vent line to remove condensation.

Artificial Ventilating System

No matter how small the kitchen, adequate ventilation is essential. Natural ventilation is fine, but any kitchen requires an artificial system with proper sized fans, and vent ducts properly proportioned and located to remove the heat and fumes as fast as they are created. The entire range section, together with broilers, kettles and steamers, should be located under a special hood provided with carefully graduated openings to secure a balanced system of ventilation and ensure a uniform change of air and the positive removal of food odors.

Canopies should be fitted with abundant lights and equipped with a continuous gutter pitched to one point and drained by a pipe to remove condensation. Pantries, dishwashing space, cafeteria counters and other isolated service units should also be adequately ventilated.

The kitchen exhaust system of ventilation should be separate from other departments.

Adequate protection must be provided against frequent grease fires. For those of purely local origin a few chemical extinguishers, readily accessible, will suffice, but for a grease fire in the main kitchen vent flues special precautions must be taken.

In the first place the vent pipe itself should be of not less than No. 10 gauge metal, properly insulated and tightly constructed. A cut-off shutter should be provided at or near the exhaust fan inlet, and arranged by means of a fusible link to operate so as to open a by-pass outlet duct and close the exhaust inlet of the fan. This not only cuts off the forced draft from the fan but prevents the fan being damaged by drawing flames through it.

In addition to this a large steam jet and control valve should be provided to discharge into the vent duct and smother the blaze. The control valve for this steam line should be located in the main kitchen within easy reach of the personnel.

Type of Flooring Important

Kitchen floors should be finished with a hard, nonslip, nonabsorbent material, easily cleaned. Quarry tile is preferable. Terrazzo, cement, wood, rubber or composition are not recommended for a number of reasons. Floors should be arranged to permit thorough flushing and numerous floor drains should be provided.

Walls should be of tile or glazed masonry units carried up to a height of from 5 to 8 feet. The remainder

RECIPES BY REQUEST

Submitted by

Grace Bulman

Superintendent of Dietitians, Veterans' Administration, Washington, D. C.

Plum Charlotte

12 slices bread
 $\frac{3}{8}$ cup butter
1 doz. canned Italian plums
(in syrup)
1 cup whipped cream

Remove crusts from slices of bread about $\frac{1}{2}$ inch thick and 3 inches square. Pit plums, cut in halves and stew in syrup from can for about 15 minutes. Butter each slice of bread and put in serving dish. Place two sections of the hot plums on each slice and pour the syrup over the fruit and bread. Serve very cold with whipped cream.

Ham and Potato Balls (12 servings)

4 cups mashed potato
2 tablespoons fat
6 egg yolks
Dash of cayenne
2 cups of cooked ham
Egg and crumbs

Mix potato, fat, 4 egg yolks and cayenne, beat until smooth, then set to cool. Chop the ham, mix with remaining 2 egg yolks, set on stove for a moment, then turn out to cool. When thoroughly cool, take a heaping tablespoonful of the potato mixture, make a hole in it, put a large teaspoonful of the chopped ham inside, close the hole and shape in a ball. Dip in flour, then in egg, roll in crumbs and fry in deep fat. One egg and $\frac{3}{4}$ cup breadcrumbs are sufficient for 12 croquettes.

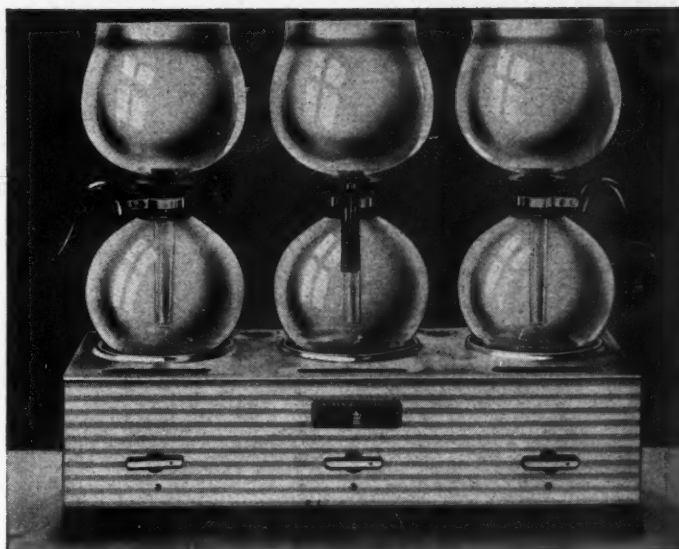
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of the walls and ceilings should be made of Portland cement or Keene's cement painted in a hard-finish enamel in a light color. Walls should intersect with floors in a coved base and all external corners and internal angles should be rounded to facilitate cleaning. Every effort must be made to eliminate ledges, crevices or other surface irregularities where dirt may collect or vermin breed.

Ceilings and walls should be kept free from exposed pipes and ventilating devices as these collect dirt. This may be obviated by furring-in such lines, a treatment also used for vent hoods. The same sanitary considerations suggest the placing of ranges, counters, refrigerators and other equipment on coved sanitary bases.

A minimum clear height of about 11 feet is permissible for ceilings, but

heights up to 13 feet are preferred.

A few of the major considerations governing the selection of kitchen equipment follow.

Use noncorrosive metals in preference to others. Be sure that heavy gauge materials are used. Examine and compare methods of assembly, welding, edge and corner construction. Look carefully into the safety features and ease of operation and maintenance of certain items such as ranges, broilers, steamers. Carefully compare and check the proposals of competing bidders against the specifications as drawn. Examine installations already made and find out how they work out under actual service conditions. Consider the manufacturer's reputation, experience and financial position. Let low price govern only when convinced that quality is equal.

size for filing was prepared. On one side is space for recording data regarding purchase, cost, installation, care and servicing and a description of the machine with details as to its operation. On the reverse side is space for a record of repairs.

The cards were distributed to interested members of the association who were asked to record existing data and return them to the chairman to be used in compiling a report the following year. With but two exceptions the records on the cards returned were so incomplete that any worthwhile compilation of data was impossible. In almost every case the reason given was that records were not available. In most instances the dietitian involved had not carried the responsibility of repairs and either no records had been kept or there had been little cooperation shown in permitting access to them.

During the past year, information has been collected through the medium of questionnaires, and while we realize that a very limited number of institutions have been reached in this way, the returns are significant and are perhaps indicative of what the character of a more general report might be. Answering the question some are doubtless asking as to why the scope of this inquiry has been so limited, may we say that only the names of those who had definitely voiced an interest in the project were included in the mailing list.

Twenty-eight copies of the first questionnaire were mailed to dietitians located mostly in the Eastern states. Eighteen reports were returned. Of these seven had kept accurate records of machine upkeep, five had kept no records, four, partial ones and two were starting to keep records of new equipment.

In the questionnaire some attempt was made to determine the attitude of superintendents or governing

The Life and Cost of Kitchen Machines

By Emma F. Holloway

Supervisor of Institutional Courses, Pratt Institute,
Brooklyn, N. Y.

IF THE head of an institutional kitchen of fifty years ago were to visit a modernly equipped one of today, it would surely seem to her that the age of miracles had returned. There is scarcely one of the tedious tasks then laboriously performed by hand that is not now being accomplished with speed and efficiency by modern machinery. Instead of considering human skills, shortcomings and old age retirements, the dietitian now has to consider the performance, expense of upkeep and life expectancy of these inanimate workers. Where one used to study the old question of whether men or women were the more efficient workers at a given task or whether workers of a particular race were more satisfactory than those of another, one now has to choose between the types of machines on the market and make decisions concerning the size and power needed for the accomplishment of given volumes of work. The kitchen pay roll is smaller than it was in the old days but the budget must include the expense of machinery replacement and repair.

While these machines are universally used, no reliable statistics are available as to the cost of upkeep or the length of satisfactory service that can be reasonably expected from them. Dietitians who are operating these machines as well as prospective buyers would be glad to have this information. The American Dietetic Association, through one of the projects

carried on by its administration section, is undertaking to collect data of this kind for its members. As chairman of this project, I presented a report of the progress made at the annual meeting of the association in October, 1935, and it is in the printed proceedings of that meeting. Little definite information is available and this article is a plea to those interested for assistance in collecting records that will be really helpful.

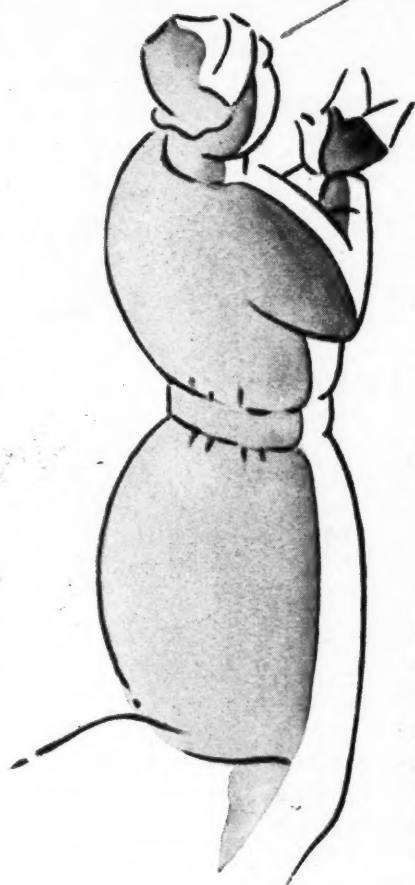
The project was started three years ago and a record card of convenient

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Date of purchase _____	From _____	Number _____	Model _____
Cost _____	Terms _____	Serial _____	New <input type="checkbox"/> Rebuilt <input type="checkbox"/> Second-hand <input type="checkbox"/>
Installed _____	By _____	Capacity _____	Attachments _____
Guaranteed for _____	By _____	Operation	
Inspection _____	By _____	Gas <input type="checkbox"/> Electricity <input type="checkbox"/>	Steam <input type="checkbox"/> Hand <input type="checkbox"/>
Oiling _____	By _____	Motor <input type="checkbox"/> H.P. _____	Current _____
Period free service 3 mo. <input type="checkbox"/> 6 mo. <input type="checkbox"/> 1 yr. <input type="checkbox"/>	Period free repairs 3 mo. <input type="checkbox"/> 6 mo. <input type="checkbox"/> 1 yr. <input type="checkbox"/>	Cycle _____	D.C. <input type="checkbox"/> A.C. <input type="checkbox"/>
Average hours per day used _____	Parts easily available Yes <input type="checkbox"/> No <input type="checkbox"/>	Trade-in value \$ _____	

On the record card is space for recording data regarding purchase, cost, installation, care and servicing and a description of the machine. On the reverse side space is provided for a detailed record of repairs.

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boards toward the installation of modern equipment. There was little criticism of the cooperation given in keeping the machine in repair, but out of the eighteen replies to the question five reported a disinclination to install up-to-date equipment. Limited financial ability undoubtedly furnished the reason in most cases. Inquiry was made as to the cooperation of employees in giving proper care to machines. Most of the answers were in the affirmative. One was significant of the dietitian's influence: "Employees cooperate well when the dietitian shows knowledge and interest in equipment and maintenance." This answer contains a hint also to all who have the responsibility of training dietitians, either in schools or during dietitian internship.

Length of Use and Upkeep Costs

A second questionnaire, which had replies from eleven different states, asked more particularly of the length of service of machines now in use and of the cost of upkeep. Of the 136 machines listed in the reports, fifty-five have been in use ten years or longer. To the question "What is the prospect of further use?" seven replied "Good." To the question "How does the cost of upkeep for the first five years compare with that of the last five?" six reports stated that either no record had been kept or an incomplete one, five reported a decidedly greater expense and one said "more than double."

A few cases of machines in long use were noted and perhaps indicate what may be expected if reasonably good care is extended. Two mixing machines, one in use for fifteen years and another for fourteen years, were still in good condition, giving promise of several years' more use. One vegetable peeler in use twelve years was still doing good work. Another one in use fifteen years would probably have to be replaced soon. A steam table in use fifteen years needed replacing and a steamer that had been used fourteen years had never been out of order. Considering recent improvements we may expect longer life of the newer equipment.

We asked for constructive suggestions as to care of machines. The replies listed those reasonable attentions which all know should be given but which are often neglected: "Assignment of care of each machine to a responsible person." "Daily inspection for cleanliness and constant supervision by dietitian when in use." "Immediate adjustment of even minor repairs." "Thorough knowledge of operating directions." "Regular oiling and inspections." "Repairs by competent person."

The following were suggestions for giving instructions in the use of the machines. "Printed instructions should

be easily available." "Directions for operation, with a simple diagram, should hang by the machine." "Any special warnings should be printed in large or colored letters." "When explaining its operation, demonstrate by actually using the machine." "Explain the value of the machine and the cost of repairs."

Many reports came from institutions where much or all of the equipment had been installed within the past five years. A number said that while no records had been kept in previous years such records had been started for new machines. There are many statistics regarding the size, capacity and horse power of equipment best suited to specific volumes of business in institutional kitchens which could be assembled and would be of great value to prospective users and to teachers. The manufacturing companies supply us with definite and authentic information about such details, but there are many of us who place greater confidence in evidence gathered from actual experience. If, among the records kept, there could be notes about satisfactions and dissatisfactions, with definite reasons given which could be passed on to interested persons, we feel that a valuable contribution to our general knowledge would be made. There is evidence of growing interest in this project. The past few weeks have brought several inquiries. Only a few have so far contributed information, but if each reader of this article who has opportunity to do so would keep these records we may after a few years be able to compile tables of definite value.

Report to Be Available Soon

The special diet committee of the Council of Social Agencies of Chicago has completed its report which will be available soon. The committee of the American Dietetic Association has been working on the problem presented that the recommendations of the United States Department of Agriculture, Bureau of Home Economics publication 296 be accepted as the standard and that all members of the association use this. Such a blanket recommendation would seem inadvisable, inasmuch as Dr. Stiebling, one of the co-authors of the bulletin, has made the statement that she does not recommend all of these standards as adequate, that one of them is entirely an emergency ration and is not intended to meet an individual's requirements for a long period. As there are many who interpret all four of these diets as adequate, it seems advisable for the dietetic association to make certain qualifications in regard to the use of the material, when adopting the diets as standards.

FOOD FOR THOUGHT

- In finding out more about the oxidation of fats, some interesting facts are being brought to light upon the changes that take place in a number of foods. For instance, Dr. R. O. Bengis, of Yale, reported to the American Medical Association that the reason that coffee grows stale when it grows old is due to the oxidation of the fatty aroma substances found in it. Coffee, by the way, seems to be getting a great deal of attention lately. If you think your coffee could be improved, you will be interested in an article which recently appeared in *Popular Science* entitled "A Better Cup of Coffee." It gives some very valuable suggestions.

- A new type of cooking utensil is now offered to the dietitian—a glass top-of-stove saucepan. This differs



from ovenware in that it is lighter in weight and more heat resistant so that it may come in contact with the flame.

- A new booklet has been brought out by the California Fruit Growers Exchange—"Fruits That Help Keep the Body Vigorous." Of course, it emphasizes the acid-base balance, and the alkalinizing effect of fruits and vegetables. Dietitians who have been trying to produce acid ash diets must be somewhat amused at this emphasis, as they know how hard it is to get an acid ash diet, if the diet meets all other normal requirements. On the whole, however, it is a nice booklet and of interest to dietitians.

- Those dietitians who meet many foreign patients will welcome the new booklet entitled "Nationality Recipes" compiled by Eleanor F. Wells, director of the School of Home Making, Y. W. C. A., Providence, R. I. This booklet has recipes for dishes typical of twenty-four different nationalities. For some there is quite a list, for others just a few. In talking with a foreign patient the dietitian who mentions one or two famous dishes from his country will have established a friendly contact which means much in getting the patient to cooperate with the dietitian.

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6	Dried Milk	Intolerance Allergy Travelling
7	Acid Milk	Marasmus Diarrhea Celiac Disease
8	Protein Milk	Diarrhea Celiac Disease
9	Butter-Flour Mixture	Marasmus
10	Goat's Milk	Allergy



ARTIFICIAL feeding consists of cow's milk modified to the degree of adequacy of breast milk. The types of formulæ devised appear different—but successful mixtures contain approximately the same distribution in protein, carbohydrate and fat. Two-thirds of the total calories are supplied in milk and one-third in added carbohydrate. The formulæ contain 10-20% of the calories in protein, 20-30% in fat and 50-70% in carbohydrate.

Most infants tolerate whole milk. But those with irritable gastro-intestinal tracts, limited digestive capacities or allergic sensitivities, require milk adapted to their low tolerance. As a result, milk has been altered chemically in various ways to make it especially suitable for each type of infant feeding problem. The adjacent column reveals indications for various milks.

But the ten milks available for infant feeding can be safely modified with Karo. It is adapted to every type of formula devised. Karo consists of dextrans, maltose and dextrose (with a small percentage of sucrose added for flavor) practically free from protein, starch and minerals. Karo is a non-allergic carbohydrate, not readily fermentable, well tolerated, readily digested, effectively utilized and economical for both the baby and the budget.

Corn Products Consulting Service for Physicians is available for further clinical information regarding Karo. Please Address: Corn Products Sales Company, Dept. H-3, 17 Battery Place, New York City.

REFERENCES:

Kugelmass, Clinical Nutrition in Infancy and Childhood, (Lippincott).
Marriott, Infant Nutrition, (Mosby).
McLean & Fales, Scientific Feeding in Infancy, (Lea & Febiger).

April Dinner Menus for the Staff*

By Sister Mary Victoria

Director, Department of Nutrition, St. Mary's Hospital, Rochester, Minn.

Day	Meat	Potato or Substitute	Vegetable	Salad or Relish	Dessert
1.	Veal Chops, Ripe Olive and Parsley Garnish	Mashed Potatoes	Stewed Tomatoes	Perfection Salad	Cottage Pudding, Chocolate Sauce
2.	Roast Beef and Gravy	Parsley Buttered Potatoes	Mashed Rutabagas	Head Lettuce, Thousand Island Dressing	Date Nut Pudding With Whipped Cream
3.	Broiled Halibut, Watercress Garnish	Baked Potatoes	Creamed Peas	Waldorf Salad	Peach Betty
4.	Breaded Pork Cutlets	Escalloped Potatoes	Glazed Parsnips	Cabbage Salad With Pimiento	Pineapple Bavarian Cream
5.	Fried Chicken, Spiced Watermelon and Parsley Garnish	Mashed Potatoes	Green Beans	Gingerale Salad	Apricot Sundae and Wafers
6.	Broiled Steaks With Mushrooms	Creamed Diced Potatoes	Buttered Carrots	Spiced Pears	Lemon Pie
7.	Roast Veal and Gravy	Browned Potatoes	Stewed Tomatoes	Cabbage and Peanut Salad	Heavenly Hash
8.	Chicken Pie With Cut Biscuits, Watercress		Asparagus Tips	Combination Fresh Vegetable Salad	Spanish Cream
9.	Roast Pork and Gravy	Parsley Buttered Potatoes	Fresh Peas	Cinnamon Apple Rings With Cream Cheese Ball	Chocolate Ice Cream and Wafers
10.	Steamed Fish, Tartare Sauce	Potatoes Au Gratin	Fresh Spinach	Pickled Carrots	Pineapple Upside Down Cake With Whipped Cream
11.	Meat Loaf, Chili Sauce	Baked Potatoes	Cabbage	Prunes in Lemon Gelatine	Butterscotch Tapioca
12.	Roast Chicken With Dressing and Gravy	Mashed Potatoes	Fresh Peas	Peach Half Filled With Diced Fruit	Ice Cream and Wafers
13.	Baked Ham, Spiced Prune Garnish	Escalloped Potatoes	Cauliflower	Spring Salad, French Dressing	Cottage Pudding, Apricot and Banana Sauce
14.	Swiss Steak	Mashed Potatoes	Carrots	Pickled Beets on Lettuce	Apple Pie
15.	Roast Lamb and Gravy	Potatoes With Crumbs	Fresh Green Beans	Diced Pear in Mint Gelatine	Rice Custard
16.	Veal Cutlets	Mashed Potatoes	Buttered Corn Kernels	Spiced Peach on Lettuce Salad	Butterscotch Sundae and Wafers
17.	Baked Fish	Creamed Whole Potatoes	Vinegar Beets	Coleslaw	Blueberry Cobbler With Whipped Cream
18.	Roast Beef and Gravy, Parsley Garnish	Browned Potatoes	Creamed Onions	Peach and Date Salad, Mayonnaise	Blanmange, Cherry Sauce
19.	Fried Chicken and Gravy	Parsley Buttered Potatoes	New Peas	Gingerale Salad	Ice Cream and Wafers
20.	Pork Chops	Mashed Potatoes	Creamed Celery	Pear Salad, Red Gelatine Cube Garnish	Chocolate Pudding With Whipped Cream
21.	Meat Loaf, Mushroom Sauce	Buttered Potatoes	Harvard Beets	Head Lettuce, French Dressing	Snow Pudding, Custard Sauce
22.	Roast Veal and Gravy	Potatoes With Crumbs	Fresh Spinach	Prunes Stuffed With Cream Cheese Salad	Orange Sherbet and Wafers
23.	Boiled Dinner With Beef	Boiled Potatoes	Cabbage Carrots	Tomato and Lettuce Salad	Graham Cracker Pudding With Whipped Cream
24.	Salmon Loaf	Mashed Potatoes	New Peas in Cream	Coleslaw	Fresh Strawberry Shortcake
25.	Broiled Steaks, Radish Garnish	Creamed Whole Potatoes	Buttered Onions	Pineapple, Apricot and Marshmallow Salad	Glorified Rice, Maple Sauce and Nuts
26.	Chicken Fricassée	Mashed Potatoes	Fresh Spinach	Grapefruit and Celery Salad	Chocolate Sundae and a Rich Cookie
27.	Roast Beef and Gravy	Yorkshire Pudding	Creamed Cabbage	Golden Glow Salad, Mayonnaise	Bread Pudding With Apple and Brown Sugar
28.	Veal Birds	Baked Potatoes	Creamed Green Beans	Spiced Peach on Lettuce Salad	Angelfood Cake, Raspberry Sauce and Whipped Cream
29.	Roast Lamb and Gravy	Browned Potatoes	Buttered Carrots	Head Lettuce, Roquefort Dressing	Cherry Cobbler
30.	Boiled Ham, Horseradish Sauce	Escalloped Potatoes	Asparagus	Pineapple and Red Cherry Salad	Ice Cream, Chocolate Sauce

*Recipes will be supplied on request by Anna E. Boller, The MODERN HOSPITAL, Chicago.

Colson

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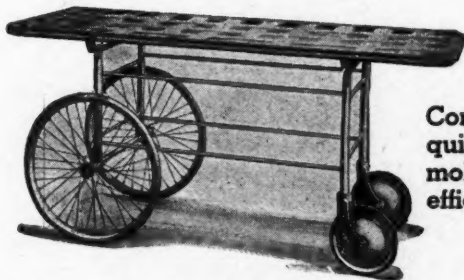
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NEWS IN REVIEW

Nursing Problems and Legislation Take Attention of State Association Secretaries

An actual shortage of nurses, reported from several states at the annual conference of secretaries of state hospital associations meeting in Chicago on February 17 and 18, precipitated a lively discussion of nursing education.

Vigorous objection to any attempts to limit nursing education to schools with university affiliations was voiced by a few secretaries. The majority agreed that it was time to erect warning signs to the nursing groups that they must not advance standards so rapidly that the supply of nurses is inadequate to meet needs, especially in the smaller hospitals and the rural areas. Several of those present reported that they are now using attendants to supplement their nursing forces or, in a few cases, to replace them.

A resolution adopted by the secretaries requested the members of the nursing subcommittee of the Council on Community Relations to proceed slowly in approving any further advances in the nursing curriculum and specifically asked them to request the nursing bodies to consult with the state hospital association before attempting to make any mandatory changes in nursing education in any state.

Dr. C. W. Munger, chairman of the nursing subcommittee of the council, declared that there was considerable misapprehension regarding the work of the curriculum committee of the National League of Nursing Education. The curriculum, he said, is being prepared on the theory that nurse training is an educational activity.

The League does not expect to achieve the curriculum immediately, Doctor Munger declared, but hopes that it may be widely adopted over a period of ten or fifteen years. A group of hospital administrators are being asked to act as consultants to the curriculum committee and the committee expects to embody in its report specific suggestions for methods of carrying out the recommendations under present financial circumstances, he stated. Doctor Munger added that the curriculum is still in a tentative state and has been sent out over the country for advice and criticism and not for adoption.

A proposal for a central accrediting agency for nursing schools was put

forward by Dr. A. C. Bachmeyer, director, University of Chicago Clinics, speaking before the Central Council of Nursing Education, which met in Chicago simultaneously with the state secretaries. Doctor Bachmeyer urged that the standards set up for such accrediting should be flexible and should stimulate experimentation. As a long step forward he proposed that some strong central agency should ascertain and publish the percentage of graduates from each school who pass their state board examinations. Students of nursing, he declared, would soon find out about the standing of the schools and would avoid the schools with a large percentage of failures. His paper will appear in the April issue of *The MODERN HOSPITAL*.

State legislation also occupied a great deal of the attention of the state secretaries. Most of them declared that the legislative reporting service of the A.H.A. was of real help to them in keeping abreast of legislative developments. Considerable time was devoted to a review of the legislative activities in each state, especially labor laws, workmen's compensation acts, care of WPA workers, and state control as they affect hospitals. The state hospital associations agreed to be subject to an assessment from the national association to meet the costs of the legislative service as well as the work of the joint committee in Washington until such time as the membership and finances of the A.H.A. are reorganized to make this unnecessary.

John Mannix, chairman of the committee on adjusting membership regulations, made a preliminary report on the decisions reached by that committee. These will carry forward the recommendations of the committee presented to convention in St. Louis last fall.

Other subjects discussed by the secretaries were convention exhibits, rotation of convention dates and development of a speakers' bureau, sectional publications, the financing of sectional associations, and the development of sectional membership.

Clarence E. Ford, assistant commissioner of social welfare in New York, outlined the system of state control of the hospitals which are administered by his department.

Junior Membership in A. C. H. A. Is Proposed

A proposal to add another type of membership in the American College of Hospital Administrators was discussed by officers of the college, meeting in Chicago on February 17. The new grade would be known as junior membership and would be open to those who are not eligible to be members or fellows. It was also proposed that the requirement of a thesis in hospital administration be dropped for members and fellows but required only of the junior members.

Father Alphonse Schwitalla, as chairman, presented a tentative report of his committee on the education of hospital administrators. Robert E. Neff reported that the tabulations on the training, salaries and activities of hospital administrators based on the questionnaires sent out by the college were completed, and that the final report on the study could be prepared shortly. Preliminary tabulations from this study were presented at the meeting of the college in St. Louis last fall and were published in the fourteenth edition of *The HOSPITAL YEARBOOK*.

To Celebrate 200th Anniversary

Two hundred years of continuous hospital service by the City of New York will be commemorated at a meeting held by the department of hospitals at the New York Academy of Medicine on May 12. The speakers include Dr. S. S. Goldwater, commissioner of hospitals; Mayor F. H. LaGuardia; Dr. Henry E. Sigerist, professor of the history of medicine at Johns Hopkins University, and Dr. George E. Vincent, formerly president of the Rockefeller Foundation. Doctor Vincent will interpret the responsibilities, opportunities and social significance of the hospital.

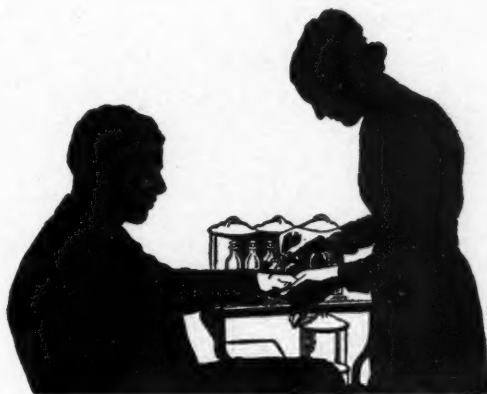
Students Give \$2,600 in Service

Students in the King County Hospital Unit 1 (Harborview) School of Nursing of the University of Washington contribute \$2,600 worth of service to the hospital a year according to a statement issued by the board of trustees. This school of nursing, one of the five in the United States given full rating for both graduate and undergraduate work is supported in two-thirds by the students and one-third by the University of Washington. None of the educational expenses are borne by the hospital. Twenty-seven undergraduates have received nursing degrees and ninety-six graduate nurses have received certificates of administration during the five-year period the school has operated.

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PRINCIPAL OFFICES AND LABORATORIES, INDIANAPOLIS, INDIANA, U. S. A.

National Hospital Day Committee Gives Aids to Local Committees for Publicizing Event

The National Hospital Day Committee of the American Hospital Association, under the chairmanship of Albert G. Hahn, Protestant Deaconess Hospital, Evansville, Ind., has prepared a series of suggestions for the use of hospitals in observance of the day, May 12. These are concerned with advance publicity, invitations, events of the day, the program at the hospital and suggestions of exhibits.

The committee calls attention to the fact that two awards are to be given this year, one to hospitals in small towns and one to institutions in larger places.

The suggestions of the committee for advance publicity are:

1. National Hospital Day trailers in the theaters.
2. Mention of the day by merchants in their advertisements.
3. Poster and essay contests in schools.
4. Poster displays in show windows and public elevators.
5. Displays in windows of downtown stores.

6. Notice in the county medical bulletin.

7. Mention of day by civic club secretaries in their weekly news letters.

8. Gummed stickers on outgoing mail.

9. Advance posters on delivery trucks and street cars.

10. Resolution or proclamation from mayor.

11. Cooperation of doctors.

12. Advance radio programs.

13. Joint church service for all nurses of city on Sunday preceding day.

Invitations may well go to the following: newspapers, hospital bulletins, radio public, luncheon clubs, friends and alumnae. Devices used successfully in the past have been the delivery of invitations to the surrounding territory by airplanes, to the citizens by means of milk bottle collars, to store and factory workers by payroll enclosures, and to churches and civic clubs by special donated folders.

Four Sectional Meetings of A. C. S. During Month

Four sectional meetings of the American College of Surgeons are to be held this month, each of which will include a two-day hospital conference. The dates are as follows: Dallas, Tex., March 4 to 6; Omaha, Neb., March 11 to 13; Louisville, Ky., March 19 to 21, and Buffalo, N. Y., March 26 to 28.

The hospital conferences for the four meetings are largely similar in subject matter, although on some of the programs there will be different speakers in the various cities. The first day's session is devoted to the subject of providing funds for the operation of the hospital. Government assistance will be discussed in all four cities by Robert Jolly, superintendent, Memorial Hospital, Houston, Tex. The subjects of current revenues, endowments, gifts and donations, and group hospitalization will be treated by local persons prominent in hospital affairs in the various sections.

The afternoon session in each city will be devoted to papers on the educational program of the college, the integrity of the surgeon, graduate training for surgery, staff conferences, medical records, fractures, cancer patients, and the relation of group hospitalization to the medical profession. The last subject will be presented by C. Rufus Rorem, con-

sultant on group hospitalization, American Hospital Association. Various speakers will present the other subjects in the different cities. In Louisville the subject of nursing and the modern hospital has been added to the afternoon program.

A round table conference on everyday hospital problems will be conducted by Robert Jolly during the evening of the first day's session in each city. The second day is to be devoted to demonstrations of hospital standardization and administration in local hospitals in each city, while the evening of the second day will witness a community health meeting.

Following the meeting in Dallas, the Texas State Hospital Association will hold its annual meeting in the same city on March 6 and 7.

Toronto General Gets Radium

The purchase of \$155,000 worth of radium, mined in the Great Bear Lake Mines, was recently made by the Ontario government for the use of the cancer clinic at the Toronto General Hospital.

A Correction

In the pictorial presentation last month of the buildings of the Warm Springs Foundation, Warm Springs, Ga., the name of the architect, Henry J. Toombs, was inadvertently omitted.

Two N. Y. C. Hospitals Merge

A merger of the Queens General Hospital and the Queensboro Hospital, New York City, has been announced by Dr. S. S. Goldwater, commissioner of hospitals. The Queensboro Hospital, a fifty-four-bed institution, was built twenty years ago to be used in the care of contagious diseases and now has seventy-nine patients. It is located on the grounds of the new Queens General Hospital which was opened last fall with a capacity of 580 beds.

The merger, to take effect on March 1, is being made to promote economy and efficiency, and the staff of the Queens General will be enlarged sufficiently to handle both institutions. The medical board and staff of Queensboro will be discontinued, and members who have passed the statutory retirement age will be retired while the younger members will be appointed to positions on the staff of Queens General.

Standardize Charges in Southwestern Indiana

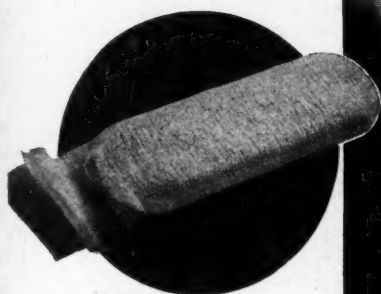
A standardization of hospital charges in the southwestern section of the Indiana Hospital Association has been effected as follows: daily rate per ward bed, \$3; use of operating room for minor operations, \$5, for major operations, \$10; anesthesia for a minor case, \$5, for a major case, \$10; charges for laboratory, x-ray, medicines, dressings and other services to be made according to prices prevailing in the area.

The notice was filed with township trustees in the name of the Vermillion County Hospital, Clinton; Clay County Hospital, Brazil; Hoover's Sanatorium, St. Anthony's Hospital and Union Hospital, Terre Haute; Mary Sherman Memorial Hospital, Sullivan; Freeman Greene County Hospital, Linton; Good Samaritan Hospital, Vincennes; Parkview Hospital, Tell City; St. Mary's Hospital, Welborn-Walker Hospital and Protestant Deaconess Hospital, Evansville; Methodist Hospital, Princeton. The Good Samaritan Hospital, Vincennes, could not be included as it has a special contract with Knox County at different rates which cannot be canceled.

Modernization Includes Soundproofing

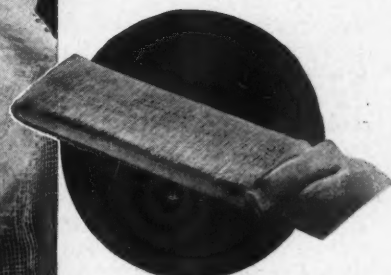
Included in modernization work progressing at the Hackensack Hospital, Hackensack, N. J., is the soundproofing of the diet kitchens on the first, second, third and fourth floors, in addition to the serving pantry in the nurses' dining room. This work is being sponsored and financed by the woman's auxiliary.

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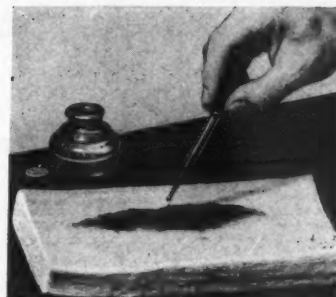
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EVERYTHING FOR THE HOSPITAL — EXCEPT FOOD AND DRUGS

New Jersey Hospital Group "Sees the Patient Through"

"Seeing the Patient Through," a demonstration in five acts was witnessed by one hundred representatives of hospitals throughout the state of New Jersey at the winter conference of the New Jersey Hospital Association. This event took place at the Orange Memorial Hospital, Orange, N. J., following a luncheon and business meeting.

The first scene depicted the admission of the patient with an interview taking place between the patient's wife and the admitting worker. This showed how identification data are obtained and the arrangements made for payment. In the second scene, revealing the medical and nursing aspects, the doctor and nurse discuss diagnostic study and treatment with reference to nursing and dietetic problems. The third scene centered around social service. By the doctor's request, a social study is made for better understanding of the patient and to facilitate further medical treatment. This scene was interpreted by Ruth Coon, superintendent, New Jersey Orthopaedic Hospital and Dispensary, Orange, N. J.

The fourth scene disclosed the progression of the medical treatment, indicating how the patient's family, the hospital and community cooperate in plans for after care. The demonstration closed with a scene called "The Good Neighbor" with Miss Coon answering the questions of an individual interested in community affairs. The various scenes were acted by members of the staffs of the Orange Memorial Hospital and the New Jersey Orthopaedic Hospital.

The program was arranged by a committee consisting of Miss Coon as chairman, Frances Holbrook, director of the social service and admitting departments of Orange Memorial Hospital, and Dr. Emil Frankel of the State Department of Institutions and Agencies.

Negro Hospital Administrators Hold Successful Conference

Under the leadership of Dr. M. O. Bousfield, associate director for medical services of the Julius Rosenwald Fund, the administrators of twenty-seven hospitals serving primarily colored patients met for a two-day conference at Durham, N. C., January 24 and 25. The meeting was sponsored by the committee on medical education and hospitals of the National Medical Association of which Doctor Bousfield is a former president.

The meetings took the form of a round table presided over by Dr. Malcolm T. MacEachern of the American College of Surgeons. He was assisted

by Dr. C. Rufus Rorem of the Julius Rosenwald Fund in the presentation of hospital accounting and group hospitalization.

In addition to the general problems of administrative practice and community relations which must be faced by hospitals, the institutions serving Negro patients must also deal with interracial relations among the professional staff and within the community. The round table discussion brought out many instances of successful interracial professional relations and it is hoped it will serve as the basis for mutual understanding between white and colored groups. A number of institutions represented have been approved by the American College of Surgeons and also by the American Medical Association for the training of interns. They also hold membership in the American Hospital Association. Among those who took an active part in the discussion were A. W. Dent, Flint-Goodridge Hospital, New Orleans; Dr. L. C. Downing, Burrell Memorial Hospital, Roanoke, Va.; Dr. J. W. Lawlah, Provident Hospital, Chicago; William M. Rich, Lincoln Hospital, Durham, N. C.

Medical Social Workers

Discuss Standards

Standards and functions of medical social work formed the subject of discussion at the midwinter meeting of the North Atlantic District of the American Association of Medical Social Workers held in New York City. The problems involved in setting up effective standards which would be useful to both social service departments and to the grading and standardization groups in the hospital field were presented by Mary M. Maxwell, executive secretary. Miss Maxwell revealed that studies are in process which will probably bring out a statement as to the ratio of social service personnel required per 100 hospital admissions.

Harriett M. Bartlett, chairman of the functions committee and author of "Medical Social Work," considered the relationship of the medical social worker to the physician and to the patient. She emphasized that leadership in study and treatment in the individual medical social case should come from the doctor. Much interest centered likewise upon the remarks of Edith M. Baker, chairman of the association's committee on medical care and community health, on the medical social worker's functions outside the hospital in the field of community health.

Margaret Nichols, chairman of the district, presided, and Lena R. Waters, president of the association, reviewed the historical development of the association.

Coming Meetings

- Texas Hospital Association.**
Next meeting, Dallas, Mar. 6-7.
- Ohio Hospital Association.**
Next meeting, Columbus, Apr. 14-15.
- Virginia, North and South Carolina Hospital Associations.**
Next meeting, Old Point Comfort, Va., Apr. 16-17.
- Association of Western Hospitals.**
Next meeting, San Francisco, Apr. 20-23.
- Alabama Hospital Association.**
Next meeting, Montgomery, Apr. 21.
- Pennsylvania Hospital Association.**
Next meeting, Pittsburgh, Apr. 22-24.
- Iowa Hospital Association.**
Next meeting, Apr. 27-28.
- Colorado Hospital Association.**
Next meeting, Denver, Apr. 28-29.
- Mississippi Hospital Association.**
Next meeting, Greenville, May 4.
- Tri-State Hospital Assembly.** (Indiana, Illinois, Wisconsin)
Next meeting, Chicago, May 6-8.
- American Medical Association.**
Next meeting, Kansas City, Mo., May 11-15.
- Minnesota Hospital Association.**
Next meeting, St. Paul, May 14-15.
- Hospital Association of New York State.**
Next meeting, Buffalo, May 21-22.
- New Jersey Hospital Association.**
Next meeting, Atlantic City, June 4-6.
- Catholic Hospital Association.**
Next meeting, Baltimore, June 15-19.
- Three National Nursing Organizations, Biennial Meeting.**
Next meeting, Los Angeles, June 22-27.
- Manitoba Hospital Association.**
Next meeting, Winnipeg, June 25-26.
- American College of Hospital Administrators.**
Next meeting, Cleveland, Sept. 26-28.
- American Protestant Hospital Association.**
Next meeting, Cleveland, Sept. 26-28.
- American Hospital Association.**
Next meeting, Cleveland, Sept. 28-Oct. 2.
- National Association of Nurse Anesthetists.**
Next meeting, Cleveland, Sept. 29-Oct. 1.
- Children's Hospital Association.**
Next meeting, Cleveland, Sept. 30-Oct. 1.
- American Dietetic Association.**
Next meeting, Boston, Oct. 11-16.
- Ontario Hospital Association.**
Next meeting, Toronto, Oct. 19-23.
- Kansas Hospital Association.**
Next meeting, McPherson, Oct. 31.

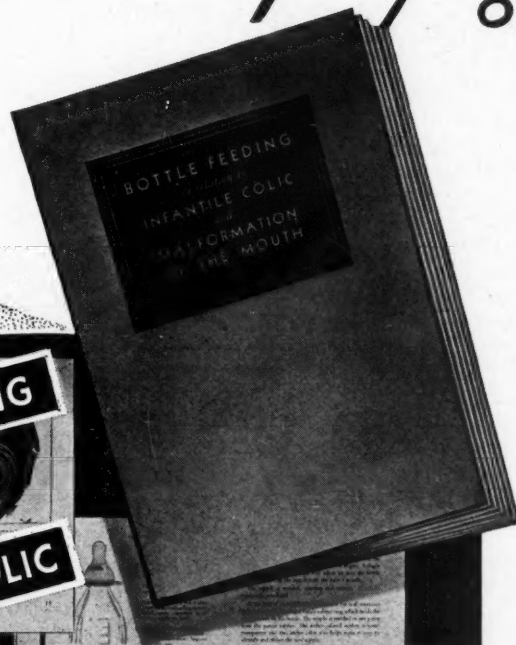
Convention Date Announced

Emphasis will be placed upon mental hygiene for the average patient at the fifteenth annual convention of the American Physiotherapy Association when it meets at Los Angeles from June 28 to July 2. Sessions will be held on electrophysics and electrotherapy. Demonstrations of underwater gymnastics, the mobilizing of injured joints, and posture techniques will be given. The meetings are to be open to anyone interested in physical therapy.

Pennsylvania Dietitians to Meet

The annual convention of the Pennsylvania State Dietetic Association will be held on May 14 and 15 at the Pennsylvania State College. A number of nationally known speakers will be on the program.

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NEW BUILDING PROJECTS

SPRINGERVILLE, ARIZ.—A hospital to serve the White Mountain territory is being built here of native rock and cement. In the past it has always been necessary for patients in this district to go to Phoenix or to Albuquerque, N. M., for hospitalization. The federal government has granted \$13,323.10 for the twelve-room building, and the rest of the amount necessary is being raised by subscription.

LONG BEACH, CALIF.—After a period of five years, punctuated by many setbacks and an earthquake, St. Mary's Long Beach Hospital is about to have its new home. Construction has been started on the four-story earthquakeproof building being erected at a cost of \$300,000. The new building will have accommodations for 100 patients.

NEW BRITAIN, CONN.—Plans are about completed for the three-story addition to the New Britain Hospital. It will contain about thirty rooms, the first floor to be used for laboratories, the second for an x-ray department and the third for interns' quarters.

WEST POINT, GA.—The first hospital to be built in this district is now under construction with the aid of PWA funds. It will contain twenty-six beds for white patients and six for Negroes. Patients from here have always had to go to Langdale, Ala., for hospitalization.

CHICAGO, ILL.—Under construction at the University of Illinois College of Medicine is a \$1,220,000 medical and dental building being built with a federal grant of \$1,220,000, 30 per cent of which is an outright gift and the rest a loan.

WABASH, IND.—Work will be started this spring on a \$21,000 addition to the Wabash County Hospital which will include an x-ray room, a laboratory, three additional rooms for patients, a nursery and rest rooms.

FRANKLIN, MASS.—A fifty-bed memorial hospital is about to be built on the Foxboro-Wrentham turnpike, where it will be centrally located for four towns. On the first floor will be the offices, a dental department, the superintendent's suite, the kitchen, dining room and serving room and four private rooms. A ramp from the first to the second floor has been designed to eliminate an elevator, and an operating suite, consultation and board rooms, three private rooms, three main wards and an isolated obstetric department are on the second floor. Living accommodations for persons resident at the hospital are being provided on the third floor. The power plant, separate from the main building, will include the laundry and an ambulance garage.

MINNEAPOLIS, MINN.—A psychiatric department is to be built atop the present building of the University of Minnesota Hospital at a cost of \$145,900, of which \$58,900 is a PWA grant.

ORANGEBURG, N. Y.—Contracts aggregating more than \$3,000,000 will soon be let for new construction at Rockland State Hospital including a six-story building for the confinement of disturbed or violent patients, additional dormitories to house the consequently enlarged personnel of the institution and the expansion of the power house and laundry. The six-story building will consist of wings for men and women patients connected by a full-height unit containing a dining room on each floor so that patients will not have to be moved far for meals. Twelve hundred patients will be housed in the new building, some transferred from the present hospital and the rest from other parts of the metropolitan area.

ORANGEBURG, S. C.—A three-story building is being constructed in the northern section of the city at a cost of \$171,300 to be the new city hospital.

FORT WORTH, TEX.—Long open porches will run the full length of the two-story concrete building being planned for the tuberculosis unit of Elmwood Sanatorium. Eighty-two patients will be accommodated in the \$100,000 building where private rooms are being provided for patients in advanced stages of the disease. The sanatorium is supported equally by the citizens of Fort Worth and Tarrant County.

ROANOKE, VA.—The 1936 expansion program at the Veterans Administration Facility calls for the construction of three "patient" buildings of brick and stone in architecture identical to that of the present buildings. The estimated cost of the three is \$900,000.

SEATTLE, WASH.—A new home is being planned for the Ballard Accident and General Hospital at a cost of from \$50,000 to \$75,000, according to Ethel Soper, superintendent of the institution, who recently announced the purchase of a new site. It is to be three stories high, with accommodations for fifty beds and so designed that additions may be added. A drive for funds to help defray construction costs is being inaugurated.

MILTON, W. VA.—A hydrotherapeutic building is now under construction at the Morris Memorial Hospital for Crippled Children. It will contain two pools for salt water bathing and a tub for the treatment of spastic paralysis cases.

London Hospital Expanding

Plans to rebuild the Charing Cross Hospital in London, England, are progressing, according to Dr. L. R. Broster, senior surgeon of the hospital, now in this country. The institution, which is more than one hundred years old, will be transformed into a modern hospital with three times its present capacity. Efforts are now being made to obtain for the hospital a site adjoining the Hotel Savoy on the Thames River.

Two Toronto Hospitals Completed

The scheduled formal openings of the Women's College Hospital, Toronto, Ont., and the new wing of the Toronto Western Hospital were canceled when the nation went into mourning, but both buildings were opened to the public for inspection on the appointed days. The Women's College Hospital is a 150-bed institution situated just east of Queen's Park. The new wing of the Toronto Western introduces many improvements, particularly in insulation and consequent economy in heating and soundproofing.

Orange Memorial Reports on Year

"Days of service" to patients during the year 1935 are listed in the annual report of Orange Memorial Hospital, Orange, N. J., at 81,783. This is the largest number during the sixty-two years since the hospital was founded, according to F. Stanley Howe, director. Nearly 50 per cent of these days of service were given to patients who were unable to pay more than one-fifth of the actual cost of their care. The hospital shows a deficit for the year of \$3,154.

Group Insurance at Southern Baptist

Sixty-eight employees of the Southern Baptist Hospital, at New Orleans have recently become eligible to life insurance in amounts ranging from \$500 to \$1,500 each, according to rank, through the adoption of a group policy by that organization. The policy, issued by the Prudential Insurance Company of America, is of the contributory type, the employees themselves paying a part of the premium and the remainder being assumed by the employing company.

New Journal Issued

The first issue of a new journal called the *American Journal of Socialized Medicine* made its appearance recently. Dr. Joseph Slavitt is editor with offices in Brooklyn, N. Y. It is published by the Medical League for Socialized Medicine.

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New Hospital for Colored to Have All Negro Staff

A progressive elimination of white physicians until the entire staff of the new Homer G. Phillips Hospital for Colored is composed of Negro physicians is the program announced by the Rev. Alphonse M. Schwitalla, dean of the St. Louis University Medical School and president of the Catholic Hospital Association, and Dr. Ralph L. Thompson, city hospital commissioner.

The present staff schedule has Dr. John Stewart, assistant professor of surgery in the St. Louis University Medical School, as chief of staff at the institution, and he, together with six other physicians, three of whom will be Negroes, will comprise the medical executive board. Dr. Oral S. McClellan, superintendent of City Hospital No. 2 will be superintendent of Phillips Hospital.

Each of the medical service departments will be headed by two white physicians, while assistant directors and staff physicians will be Negroes. As the colored physicians qualify for advancement, the white men on the staff will be eliminated, according to Doctor Schwitalla.

Toronto Council Organized

C. J. Decker, superintendent, Toronto General Hospital, Toronto, Ont., was chosen president of the Toronto Hospital Council formed on January 17. Dr. G. Harvey Agnew, secretary, Canadian Hospital Council, was elected honorary president. Other officers include A. J. Swanson, Toronto Western Hospital, vice president, and Henry A. Rowland, Riverdale Isolation Hospital, secretary-treasurer. It is reported that most of the Toronto hospitals have joined the new council. Development of a plan of group hospitalization for Toronto will be one of the first tasks undertaken by the council.

Draws Up Code to Regulate Broadcasts on Hospitals

The result of an unjustified attack upon a hospital in the Philadelphia area by a news commentator for a Philadelphia radio station, was the drawing up of a code of radio principles by the Hospital Council of Philadelphia for the regulation of news regarding hospitals and the medical profession.

The code, which has been submitted to the local radio stations, provides that announcements may be made that certain named individuals were taken to or admitted at specified hospitals, but that no comment or criticisms may

be added regarding the treatment or character of the service received in the hospital.

If a commentator or announcer is to make a statement that reflects adversely upon a hospital or criticizes its service, this statement shall be written out and sent to the superintendent of the institution under discussion for his information. Forty-eight hours are then to be allowed the superintendent to check his records and correct the commentator on any misconceptions of fact that appear in the paper. If the commentator or announcer does not hear from the hospital within forty-eight hours he may take it as assent to the broadcasting of the statement in the form submitted.

Erect Four Buildings at Kansas Medical School

Within the year the University of Kansas School of Medicine expects to erect a clinic building, a four-story children's ward, a warehouse for storing lumber and hospital supplies and a medical research laboratory.

The children's ward, which will cost \$108,000, is being financed by \$48,000 from the PWA and an anonymous donation of \$60,000. Ten thousand dollars was appropriated by the state legislature for the erection of the warehouse, and this amount will be supplemented by \$8,000 granted from PWA funds.

The Hixon Laboratory for Medical Research, which is to replace the temporary structure now in use, will cost \$60,000, of which \$35,000 is an anonymous gift and \$25,000, PWA funds. The clinic will be constructed with \$55,000 accumulated for this purpose by Bell Memorial Hospital over a period of years and with \$45,000 from PWA funds.

Tuberculosis Wing Trust Fund

"It has been a long cherished hope of my deceased husband and myself that an institution, or a portion of an institution, might be available in this city for the treatment of the unfortunates suffering from tuberculosis." With these words the will of the late Mrs. Charles L. Curtiss set up a trust fund to be used "in building and equipping, insofar as possible, a tuberculosis wing to Redlands Community Hospital, Redlands, Calif. When built it shall be delivered to the hospital board and be known as the Charles L. Curtiss wing." The estate, which has not yet been appraised, is expected to prove adequate to finance the proposed wing. Mrs. Curtiss, before her marriage to Doctor Curtiss, was superintendent of the old Redlands Community Hospital.

BEQUESTS AND GIFTS

GEORGIA.—The Grady Memorial Hospital, Atlanta, has announced a gift made by Cator Woolford, Atlanta, sufficient to purchase and equip a modern dental clinic for its colored patients.

ILLINOIS.—A site and funds for the erection of a hospital in Alton have been announced by the Methodist Episcopal Board of Hospitals as a gift of Eunice Smith, Alton, and Mrs. Pascal Hatch, Springfield, in memory of their parents, Mr. and Mrs. William Eliot Smith. The site is a portion of the Smith property in Alton, and the gift follows the desire of Mrs. Smith, who, many years ago, offered \$200,000 toward a hospital if additional funds were raised by the community. The proposed hospital will have seventy-five beds and be supported by an endowment fund started by the sisters.

OHIO.—Middletown Hospital, Middletown, is the beneficiary of a \$10,000 bequest from the estate of the late Mrs. Joseph M. Iseminger. The bequest was made in honor of her husband, who was prominent in the founding of the hospital and was followed by a provision to the effect that the eventual residue of the estate is to go to the hospital. . . . A. R. Hughes who was president of the Warren City Hospital, Warren, left a bequest of \$20,000 to that institution.

ONTARIO.—The Oshawa General Hospital, Oshawa, was bequeathed over \$100,000 by the will of the late Mrs. J. Albert Sykes.

PENNSYLVANIA.—The Pennsylvania Hospital, Philadelphia, has been awarded the \$54,369 residuary estate of Mrs. Hattie Grace Copp by the Orphans Court. The fund is to be used for research in memory of Mrs. Copp and her husband, Dr. Owen Copp. Doctor Copp was for many years superintendent and medical director of the hospital.

Aid for Oklahoma Rural Hospital

The Commonwealth Fund has announced that Ada, Okla., a town about eighty-six miles southeast of Oklahoma City, has been selected to receive aid from the fund in the construction of a hospital. This is the ninth rural institution to be built through the aid of the fund. The twenty-five-mile area that the hospital will serve contains from 90,000 to 100,000 persons, less than 10,000 of whom are Negroes and Indians. The district was settled by people from Tennessee, Arkansas, Mississippi and Texas and is Southern in character. Two of the three proprietary hospitals in the city will close when the new institution is ready. The community must raise \$60,000 as its share in the program.

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NAMES IN THE NEWS...

G. R. YOUNG, industrial engineer of the Reading Iron Company, has been appointed superintendent of the Homeopathic Hospital, Reading, Pa., to succeed HAROLD F. DOLD who resigned recently to become superintendent of the W. A. Foote Memorial Hospital, Jackson, Mich. Mr. Dold was also an engineer at the Reading Iron Company before he became superintendent of the Homeopathic Hospital.

DR. CLEMENT C. CLAY has been appointed medical assistant to the director of the University of Chicago Clinics, Chicago. Doctor Clay took his undergraduate work at Columbia University and his medical degree at McGill University. He has been attending the course in hospital administration conducted at the University of Chicago and his work is being arranged so that he will continue in the course to the end of the current year.

DR. CLARENCE O. CHENEY, professor of psychiatry at the College of Physicians and Surgeons of Columbia University and director of the New York State Psychiatric Institute and Hospital, has been appointed medical director of Bloomingdale Hospital, White Plains, N. Y.

HOWARD S. CULLMAN, a trustee of Beekman Street Hospital, New York City, was recently chosen vice chairman of the subcommittee on safety at sea of the U. S. Department of Commerce. Mr. Cullman spoke over a nationwide radio network on February 4 on methods of safeguarding the lives of those who go down to the sea in ships.

DR. DENNETT L. RICHARDSON was reelected superintendent of the Charles V. Chapin Hospital, Providence, R. I., for his twenty-seventh year. He is the only superintendent the institution has ever had.

J. P. PHILIP, accountant at the Palo Alto Hospital, Palo Alto, Calif., has been appointed superintendent of that institution to succeed MAE HINDMAN who submitted her resignation following her marriage.

MRS. ORPHA M. KENDALL has been appointed superintendent of nurses and principal of the school of nursing at Methodist Episcopal Hospital, Indianapolis, where she succeeds FANNIE R. FORTH who resigned recently.

DR. HARRY C. HOFFMAN has been appointed superintendent of the Somerset County Home and Hospital, Somerset, Pa., to succeed DR. ASA L. HICKOK.

DR. MORRIS HINENBURG, assistant director, Montefiore Hospital for Chronic Diseases, New York City, has been awarded an administrative fellowship by the board of trustees of the hospital. Under this grant he will spend the months of May and June in England and elsewhere studying the problem of chronic disease. He is planning to sail April 29.

SAM H. MCCRARY, one time superintendent of the Knoxville General Hospital, Knoxville, Tenn., has been appointed superintendent of that institution again, to succeed DR. ANDREW SMITH. MRS. MARY WOLFE WHITE, superintendent of nurses at Knoxville General, resigned on March 1 to accept a similar position at the Methodist Hospital, Memphis, Tenn.

MRS. JESSIE H. ADDINGTON, since 1927 head housekeeper of the Presbyterian Hospital, New York City, died in that institution after an illness of several months. Mrs. Addington was also vice president of the Executive Housekeepers' Association.

PURCELLE PECK has been appointed editor of *Public Health Nursing* to succeed DOROTHY DEMING. Miss Peck was director of the course in public health nursing at the Richmond School of Social Work and Public Health, Richmond, Va., until this appointment was made.

DR. TIMOTHY J. MURPHY, chief of staff of the Sanatorium Division of Boston City Hospital, Mattapan, Mass., died recently.

WORTH L. HOWARD, superintendent of Akron City Hospital, Akron, Ohio, has been elected president of the newly organized hospital council at Akron. WILFORD HOLCOMB, People's Hospital, was elected secretary.

VIRGINIA DURMAN is to succeed DR. PAUL PEMBERTON as superintendent of Woodburn (Oregon) Hospital.

MRS. LOLA A. CEASE, superintendent of the Ahwahnee Sanatorium, Ahwahnee, Calif., has announced her resignation, effective April 1. C. L. WOOD, Woodland, Calif., has been appointed to succeed Mrs. Cease.

SISTER URSULINE, St. Anthony's Hospital, Chicago, has been appointed to succeed SISTER GENEROSE as director of St. Joseph's Hospital, Joliet, Ill.

MRS. C. S. LEHMAN, superintendent of nurses at the San Antonio Community Hospital, Upland, Calif., resigned recently. She will be succeeded by MRS. TAUNCIE WESSINGER.

SISTER MARY GRACE, superintendent of St. Catherine's Hospital, Omaha, Neb., has been appointed vice president and supervisor of St. Mary College. SISTER MARY GENEVIEVE is to succeed her as hospital superintendent.

DR. A. BURGESS CARTER, Louisa, Ky., has been appointed acting superintendent of Eastern State Hospital, Lexington, Ky., to succeed DR. EDWARD DAVENPORT.

JOHN G. FOSTER, for years Portland manager for a national business concern, has been made business manager of the Good Samaritan Hospital, Portland Ore. CAROLYN DAVIS will continue as executive head of the hospital's medical functions.

STUART T. HUMMEL, assistant superintendent of Augustana Hospital, Chicago, has been made superintendent of the Silver Cross Hospital, Joliet, Ill.

MANDA ROE, superintendent of Victory Hospital, Stanley, Wis., has been made the new superintendent at the Dodgeville General Hospital, Dodgeville, Wis.

MRS. FLORENCE L. SANBORN, one time superintendent of the Prospect Heights and Brooklyn Maternity Hospital, Brooklyn, N. Y., has been appointed superintendent of the Bristol Hospital, Bristol, Conn., to succeed NELLIE TARRANT who had asked to be relieved of her duties.

DR. CHARLES W. HUGHES has been made chief medical officer at the veterans' hospital at Jefferson Barracks, Mo., to succeed DR. W. C. GIBSON who resigned because of ill health.

DR. STEPHEN ROMAN PIETROWICZ, former superintendent of the Chicago State Hospital, Dunning, Ill., and chief of staff at St. Mary of Nazareth Hospital, Chicago, died at the age of sixty-two.

SISTER ANICETA is the new superintendent of the Braddock General Hospital, Braddock, Pa., which was recently taken over by the Divine Order of Divine Providence.

Doctor Doane Honored

Dr. Joseph C. Doane, medical director, Jewish Hospital, Philadelphia, and editor, *The MODERN HOSPITAL*, has been elected a member of the board of health of Philadelphia. In addition to the above duties Doctor Doane is a past president of the American Hospital Association and a member of the association's council on community relations and administrative practice. He is professor of clinical medicine at Temple University School of Medicine and associate professor of medicine at the Graduate School of Medicine of the University of Pennsylvania.

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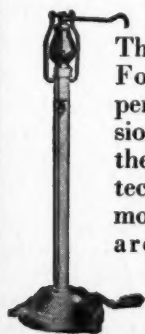
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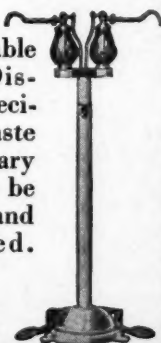
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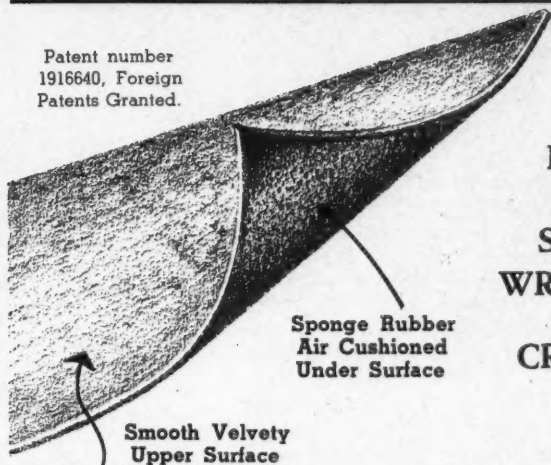
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LITERATURE in ABSTRACT . . .

Conducted by E. M. Bluestone, M.D.

Reports on Dietetic Administration

The administrative section of the American Dietetic Association has had committees at work for the past two years on the following projects of interest to hospital administrators:*

The food budget, a quantitative study of consumption to determine standard amounts, the results of which will soon appear in the *Journal of the American Dietetic Association*.

A survey on the determination of yields as served for standard wholesale cuts of beef which proves that the percentage yield is greatest from the round and loin end; that the flank and rump are generally uneconomical cuts, and that the method of cooking definitely affects the yield, roasting causing the smallest loss.

A study of fresh, canned, dried and frozen stock to determine the amounts as purchased to yield equivalent servings and the relative cost.

A study of serving costs in terms of employee hours of central tray and floor service.

A preparation of charts to show the organization of typical dietary departments.

A bibliography of significant articles. This is available through the business office.

Data for determination of cost of upkeep and life expectancy of fixed kitchen equipment.

Low cost, large quantity recipes that have been checked for cost, suitability for institutional use and practicability. Their cost is \$0.025 or below per serving and the yield of each recipe has been standardized to 100 servings.

The work of most of these committees will be continued during 1936.

*American Dietetic Association Reports for 1934-35, Bull. Am. Diet. Assn., Jan., 1936. Abstracted by Elise Davis.

The General Hospital and the Tuberculous Patient

Dr. Charles Hatfield's address to the Pennsylvania Tuberculosis Society merits a wider circulation than is obtainable in a state journal.* After reviewing the growth of hospitalization for tuberculous patients in this country and the large expenditure of money for their upkeep (\$62,000,000 annually), the author points out that in spite of recommendations by national, state and local organizations,

the general hospitals are not fulfilling their obligations to the community with respect to the treatment of the tuberculous.

In 1933, at a meeting of the advisory council of the Henry Phipps Institute, at which were present leaders in tuberculosis work from all parts of the country, the following resolution was passed:

"RESOLVED: That the advisory council of the Henry Phipps Institute approves in principle the plan of urging general hospitals throughout the country to set aside a ward or wards for the care of patients suffering from active tuberculosis, as a measure of sound economy in the expenditure of public funds, a protection to the home and a means of training physicians and nurses in the diagnosis and management of the disease. It is the opinion of the advisory council that such wards, when properly managed, are not a source of infection to other patients or attendants in the hospital." This resolution reaffirmed in substance recommendations previously enunciated by the National Tuberculosis Association, the American Hospital Association and the American Medical Association.

Doctor Hatfield lists many arguments to support the foregoing resolution and cites advantages accruing to the patient and to the hospital in the adoption of such a plan. In brief, the advantages to the patient are two: that patients with advanced disease can be treated near their homes, and that while waiting for admission to sanatoriums they may obtain immediate treatment both of a routine and a specialized nature. From a hospital standpoint it can be stated that the plan is practicable as shown by experiences in Duluth, Minn., and elsewhere and by the increase in the number of hospitals adopting the plan. Furthermore, tuberculous patients would then be segregated and the education of physicians greatly advanced.

The reluctance of general hospitals to take on this responsibility rests on the fear of additional expense and injury to the hospital when it is known that tuberculous patients are admitted. The answer to the first is that indigent patients might well be paid for by the municipality or county, in accordance with a fixed rate, a procedure followed in New York City, Detroit, Duluth and Minneapolis. The answer to the second is that a well organized tuberculosis department offers less hazard to patients

than when tuberculosis is found by accident in the general medical wards.

Objections that patients will not receive sufficient fresh air or that physicians, nurses and orderlies would be exposed to infection are readily answered by the fact that no special air is needed in the treatment of the tuberculous and that employees are safer in a well run tuberculosis institution than in hospitals where patients with open pulmonary tuberculosis lie undetected and untreated.

*Hatfield, Charles J.: Responsibility for Tuberculosis Hospital Provision Including the Use of General Hospitals, Penn. M. J., Nov., 1935. Abstracted by Eli H. Rubin, M.D.

Surgical Therapy for the Tuberculous

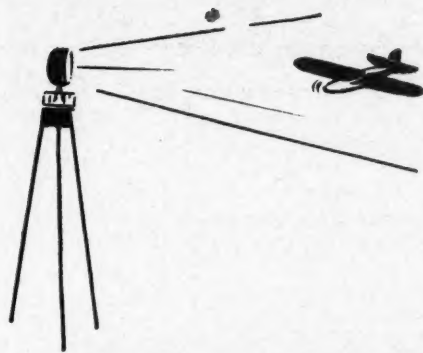
This article was prepared for the layman by an authority* on thoracic surgery.

Modern surgery, he says, is no longer a measure of last resort in the treatment of pulmonary tuberculosis. The trained surgeon, in close cooperation with the tuberculosis specialist, can secure excellent results by the proper selection of patients for surgical therapy. It is hoped that a drug will be found to kill the tubercle bacilli but until that time every effort must be made to give every patient with sufficient healthy lung tissue to maintain life, an opportunity for recovery. Surgery is usually employed after conservative medical and hygienic therapy have been unable to check the progress of the disease.

Surgery in tuberculosis was first suggested by James Carson, an Englishman, more than a century ago, but operations were not performed until sixty years later and were then considered "freak surgery." This is no longer the case and pulmonary surgery is rapidly gaining its rightful place among the surgical specialties.

Tuberculosis has long been known as a constitutional or systemic disease that may involve any tissue or organ in the body. In tuberculosis of the lungs, there is a tendency for tissue destruction with resultant cavity formation. There is also a counteracting tendency for healing if the diseased tissue is placed at rest. When the patient has been placed at rest, the lungs are not required to do much work and healing is therefore encouraged. If the disease remains progressive, the diseased lung must be immobilized, and this is possible only by surgery.

Lobectomies have been performed successfully, but are extremely dangerous and rarely indicated. Artificial pneumothorax (the introduction of air into the pleural cavity) is successful in many cases and is a relatively simple procedure. If the pleural cavity is obliterated and the lung is adherent to the chest wall, thoracoplasty (the removal of ribs to permit the collapse



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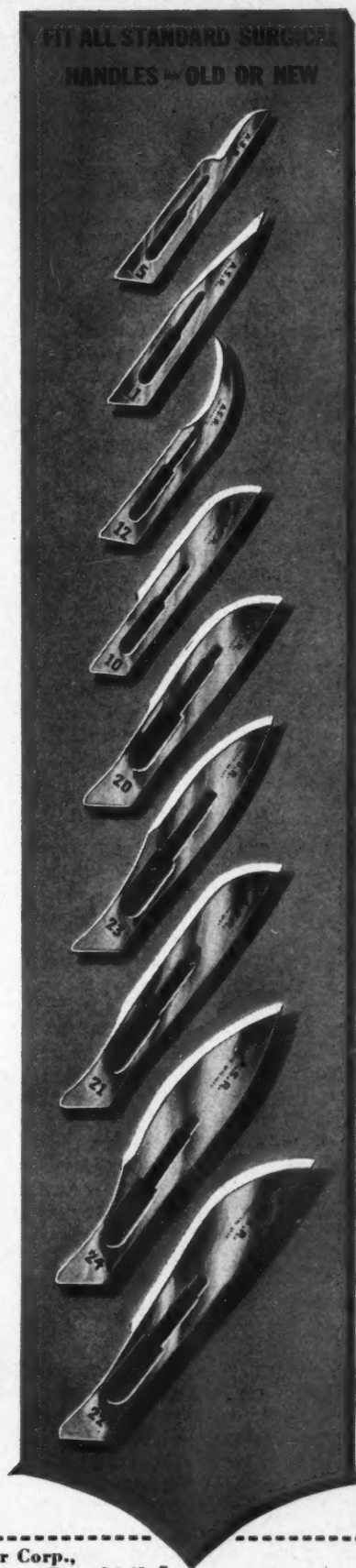
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Vol. 46, No. 3, March, 1936



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of the chest and the lung) is the operation of choice. Phrenicectomy (the destruction of the continuity of the phrenic nerve) will paralyze the diaphragm and limit the motion of the diseased lung. These are but a few of the procedures now carried out by skilled surgeons who, with experience, improve their technique and their instruments of precision.

Patients in sanatoriums in rural communities who require serious operations should be transferred to general hospitals to ensure adequate care during their postoperative course. The average sanatorium is not prepared for this service.

*Lilienthal, Howard, M.D.: Surgical Treatment in Tuberculosis, *J. Outdoor Life*, July, 1935. Abstracted by Morris Hinenburg, M.D.

The Tuberculous Patient in Philadelphia

In a study of nineteen private general hospitals in Philadelphia,* 846 tuberculous patients constituted, in 1933, 0.8 per cent of all patients admitted. Approximately three-fourths of the tuberculous patients treated had pulmonary tuberculosis and the others had nonpulmonary forms. About 10 per cent of the pulmonary tuberculosis patients had minimal disease, 45 per cent had advanced disease and the stage of 35 per cent was not recorded. A large number had tuberculous and nontuberculous complications.

In an effort to determine the character of treatment accorded these patients, the author found that the records of 41.9 per cent had no entry about sputum findings. Furthermore, only 58 of the 156 patients who came in for collapse therapy had records of positive sputum findings. In a large number there were no records at all pertaining to sputum findings. After an average length of stay of thirty-six days, the patients discharged alive were for the most part returned to the source which referred them to the hospital, that is, the private physician, chest clinic or out-patient department.

On the whole, Wiesner's study impresses one with the shortcomings in the treatment of pulmonary tuberculosis in the average general hospital. These shortcomings are all the more glaring in view of the fact that the general hospital can be made to serve as the spearhead of attack against the disease. It offers facilities for immediate segregation and early treatment of the patient and an opportunity for medical instruction to many physicians. Furthermore, many otherwise vacant beds can be utilized to advantage.

*Wiesner, Dorothy E.: The Care of Tuberculosis Patients in General Hospitals in Philadelphia, *Am. Rev. Tuberculosis*, Jan., 1936. Abstracted by Eli H. Rubin, M.D.

A City Without Clinics

An unusual occurrence has been taking place in Dayton, Ohio, a city with a population of about 200,000. During the early part of 1934 all clinics in Dayton, including municipal clinics, clinics of voluntary hospitals, and private group practice clinics were closed. Miss Ross* describes graphically her attempt to find out who was responsible for the closing of these clinics, the reasons for this step, and the effect on the community and the intern staffs of the hospitals. There is a difference of opinion as to who closed these clinics. Members of the public relations committee of the Montgomery County Medical Society were questioned as well as other doctors and individuals associated with hospitals.

After the clinics were closed an attempt was made to plan for the care of the poor sick. Through the FERA stipulated fees were paid to private physicians for care given to relief clients at home or in their offices, but this plan proved inadequate when the federal relief appropriations were discontinued last December. A sum that had been set aside by the health department for venereal clinics was used to pay doctors \$1 a treatment for visits made to their offices by people not on relief but who could not pay the regular fee. This allowance was exhausted by the middle of March, 1935, and no more treatments or funds were available until December, 1935.

The Montgomery County Anti-Tuberculosis Society withdrew \$1,000 previously contributed to a tuberculosis clinic for x-rays and used it to pay private roentgenologists selected by the patient's family physician at \$5 an x-ray. There were also available five part-time city physicians who had been employed by the health department for many years for the sick poor. Private physicians, of course, carried a great deal of the burden.

The committee of the county medical society believes that doctors and patients have been better satisfied under this plan, although this is not the general opinion of the public and those interested in medical social work. Doctors, social workers and visiting nurses stated that they did not believe that people who had asked for medical care failed to get it, but they were especially concerned about the group of people not on relief who were hesitant about asking physicians to treat them free. Mention was made about the failure to report syphilitic and other communicable diseases.

In December, 1935, with the approval of the Montgomery County Medical Society, the health department of Dayton reopened its venereal disease clinic on grounds of need and economy. Patients able to pay 25 or 50 cents will be asked to meet this fee and those who can pay more than 50

cents will be referred to private physicians. The clinic has two part-time salaried physicians. There is to be an adequate financial investigation.

The early part of this year plans were under way to reopen the other clinics with salaried physicians, although no information was available as to how the clinics would be financed.

*Ross, Mary: Why Not Do Without Clinics? *Survey Graphic*, Feb., 1936. Abstracted by Minnie Smith.

Depression Effects on Diet and Health

This is the third of a series of studies on the effects of the depression upon the health and habits of selected groups of the population. The author* surveyed a week's food supply for one hundred families in each of the cities of Baltimore, Birmingham, Cleveland, Detroit, Pittsburgh, Syracuse, a cotton mill town in South Carolina and a coal mining district in West Virginia. In New York City the food supply of 276 families was studied. All the families were drawn from the lower income levels and from those on relief.

Grouping the data according to geographic distribution, it was found that in the five northern industrial cities those families with an income of three dollars or more per week per person were able to obtain the necessary 3,000 calories per day regarded as the normal equivalent per adult male. Below this income level the calorie fuel supply fell by as much as 20 per cent in those whose income was only two dollars per week per person. Larger families suffered especially and some reported acute food shortages. In New York City those with incomes of less than four dollars per person weekly, suffered similarly. Relief families had a general higher average supply of calories than the poorest nonrelief group, yet 25 to 29 per cent in the Northern cities and in New York had substandard diets. In the other communities studied the average caloric value of the food supply of families in the lowest income level equaled or excelled the 3,000 calorie standard diet in the general use of large quantities of fat, meat, cereal, flour and sugar.

Analysis of the types of food purchased by the lower income groups shows a diminished use of milk, vegetables and fruits in all communities. In the Northern cities the milk consumption was one-third the minimum requirement. In these cities meat, fish, eggs and sugar foods were used in amounts greater than is recommended for an adequate low cost diet. The result was a diet deficient in calcium and vitamins.

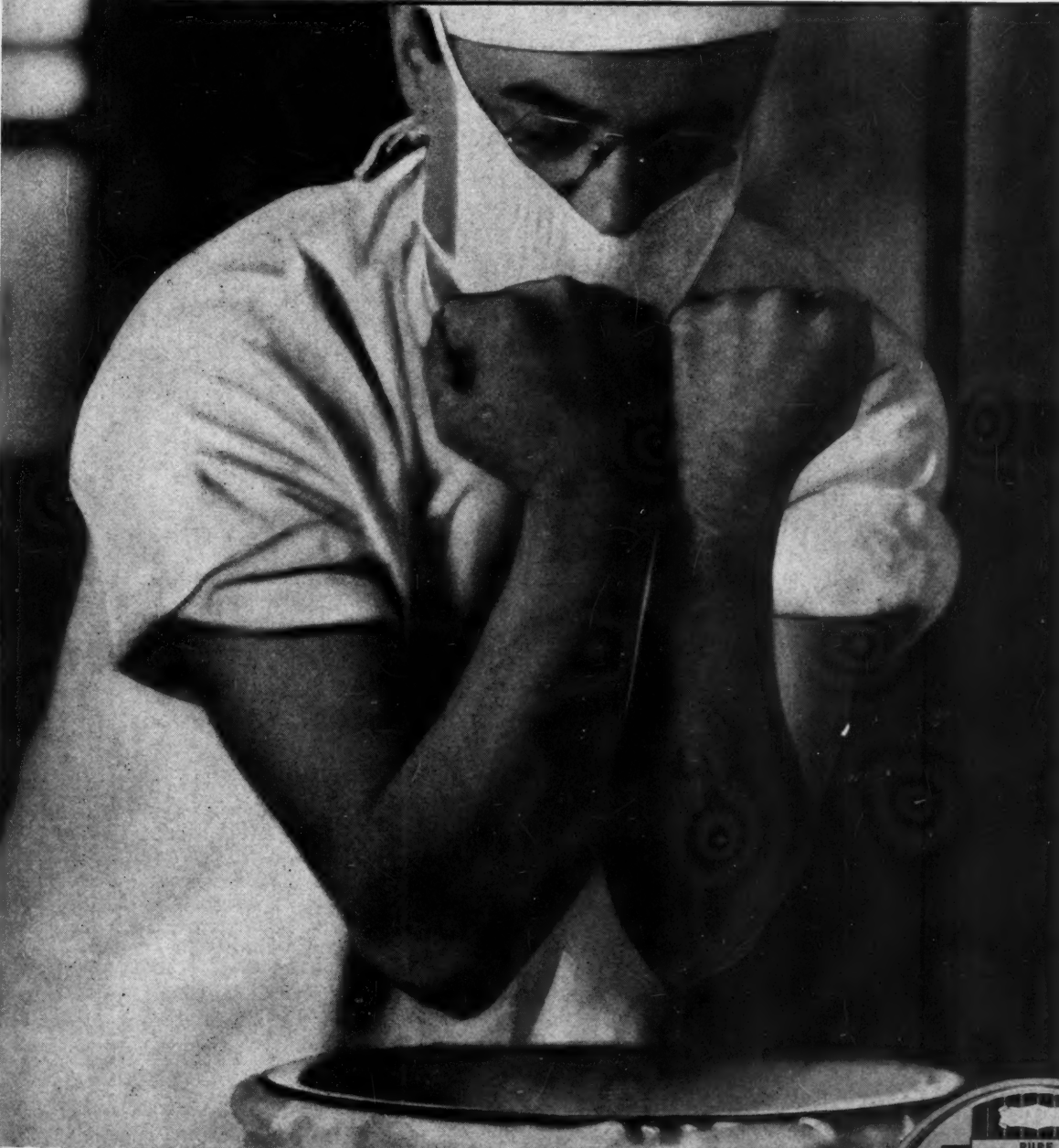
*Wiehl, Dorothy G.: A Study of Diets of Low Income Families Surveyed in 1933, *Pub. Health Rep.*, Jan. 24, 1936. Abstracted by Leonard Tarr, M.D.

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Responsibilities of Government in Patient Care

With no established formula for evaluating the degree of responsibility of the various government and non-government agencies to provide medical care in communities, the author* suggests that, in general, government agencies should complement the services of the voluntary organizations to meet the medical needs of their localities. The clinical and financial conditions of patients should be considered as aids to establish government responsibility.

Voluntary hospitals, with 25 per cent of the total number of hospital beds in the United States, care for 58 per cent of the patients. Proprietary institutions, with 6 per cent of the total number of beds, care for 12 per cent and government hospitals (federal, state, county and municipal) with 70 per cent of the beds, care for 30 per cent of all hospital patients. These figures speak for themselves and are significant.

Voluntary hospitals in most communities are exempted by law from realty and other taxes as public recognition for their charitable services. These services, if rendered under government auspices, would call for huge expenditures of public funds. It follows that the community is well served which ensures adequate support for its voluntary hospitals. Government authorities should bear this in mind and do all they can to support "the community's first line of defense against disease."

Not all voluntary hospitals are large enough nor do they have the funds to provide all the hospital care required. Government support must be provided for the needy voluntary hospitals and hospitals must be erected by the government to provide an adequate number of hospital beds. The tuberculous, mental, contagious and communicable disease cases are provided for by the government in large measure. In some places similar provision is made for orthopedic and venereal cases. There are good reasons for establishing facilities for the chronic and convalescent patients, for whom care is still inadequate.

The author goes on to advocate a district plan for admitting accident and emergency cases to the nearest hospital, to be paid for by the government if the patient is unable to pay. He would abolish the practice of sending these patients only to city or county hospitals. The hospitals operating under the district plan should be organized to render an acceptable standard of service to these patients.

Voluntary hospitals have always cared for the sick poor and have continued to do so in spite of increased demands for service and reduced income. In some communities where voluntary hospitals are unable for

financial reasons to render this service, the government should pay for the care of patients treated in these hospitals.

The problems of cooperation between government and nongovernment agencies exist only in the larger centers where institutions of both types are located. The best approach for solving these problems, in the opinion of the author, is the creation of a hospital council including representatives of government hospitals, public officials and civic-minded citizens. Such a council should formulate a community plan of cooperation by the hospitals, based on the community's requirements for hospital services.

The author lends force to his presentation by quoting Dr. C. W. Munger who, aside from describing the complementary functions of public and voluntary hospitals in Westchester County, N. Y., states that "while every public hospital should have a chronic department, I believe it should be defended against the policy so easily assumed by voluntary hospitals of using the public hospital as a dumping ground for undesirable types of cases. If public funds are used extensively in subsidizing the care of indigent patients in voluntary hospitals those hospitals should take 'the bad with the good.'"

Whether pay patients should be admitted to government hospitals is still a vexing problem. The practice may be justified if there is a community need for this service.

The author makes two points about the administration of government hospitals very clear, (1) the hospitals must be protected against political interference in administrative matters and (2) hospital policies formulated by public-spirited citizens, should be in harmony with the policies of the governing authority and the hospital council.

Government hospitals should meet the minimum requirements of the American Medical Association and the American College of Surgeons as a guide for the development of better hospital standards.

*Mills, Alden B.: *Municipal Responsibility for Hospital Care*, Pub. Management 18:11 (Jan.) 1936. Abstracted by Morris Hinenburg, M.D.

Need for Tumor Clinics in General Hospitals

The author,* associated with the tumor clinic of the Memorial Hospital, Albany, N. Y., outlines the community need for the early diagnosis and treatment of cancer. He mentions the objection that tumor clinics lead to the hospitalization of a large number of hopeless cases in acute general hospitals, but points out that this situation may be controlled. The importance of treating a disease which is

one of the leading causes of death is a challenge to the best medical minds to establish scientific clinics for all classes of patients suffering from cancer.

The clinics associated with cancer hospitals in the large centers have served well for many years, but unfortunately are not always conveniently located or easily accessible for patients living at a distance. New clinics must therefore be organized in communities lacking proper facilities for cancer care. The general hospital is the medical center of a community and it is therefore the logical place for the establishment not only of all essential clinic services, but also of a tumor clinic.

A campaign of public education has long been waged in an effort to wipe out tuberculosis. A similar intensive educational program is essential for the early diagnosis and treatment of cancer, because cancer is curable in its early stages. The establishment of a clinic is, as a rule, attended by a great deal of publicity and the result of such publicity is a demand for medical attention on the part of many patients who may otherwise ignore abnormal swellings, discharges and indolent ulcers. The number of five-year cures is increasing and the credit is due to the cancer education programs of the American College of Surgeons and many other organizations. In terms of lives saved and economic gains, the clinic is an important asset in any community.

Aside from the immediate benefits to the community, the educational value of the clinic for the physician is of equal importance. It provides knowledge and training for the rank and file of general practitioners, enabling them to serve their patients intelligently and scientifically.

The equipment for a clinic need not be elaborate. A modern deep therapy machine, a small supply of radium, partly in the form of needles, and a high frequency machine for dessication, coagulation and cutting currents are the minimum requirements.

With reference to personnel, the clinic revolves around the pathologist, radiologist, surgeon and specialists in the various branches of medicine and surgery. A registrar is essential and a social worker is desirable for the follow-up of patients.

The remainder of the article is a description of staff relationships, routine work-up procedures, financial considerations and a presentation of the methods of treatment of the more common types of new growths, all in conformity with the minimum requirements established for tumor clinics by the American College of Surgeons.

*Dickinson, Arthur M., M.D.: *The Tumor Clinic in the General Hospital*, Bull. Am. Soc. Control Cancer, Dec. 1935. Abstracted by Morris Hinenburg, M.D.



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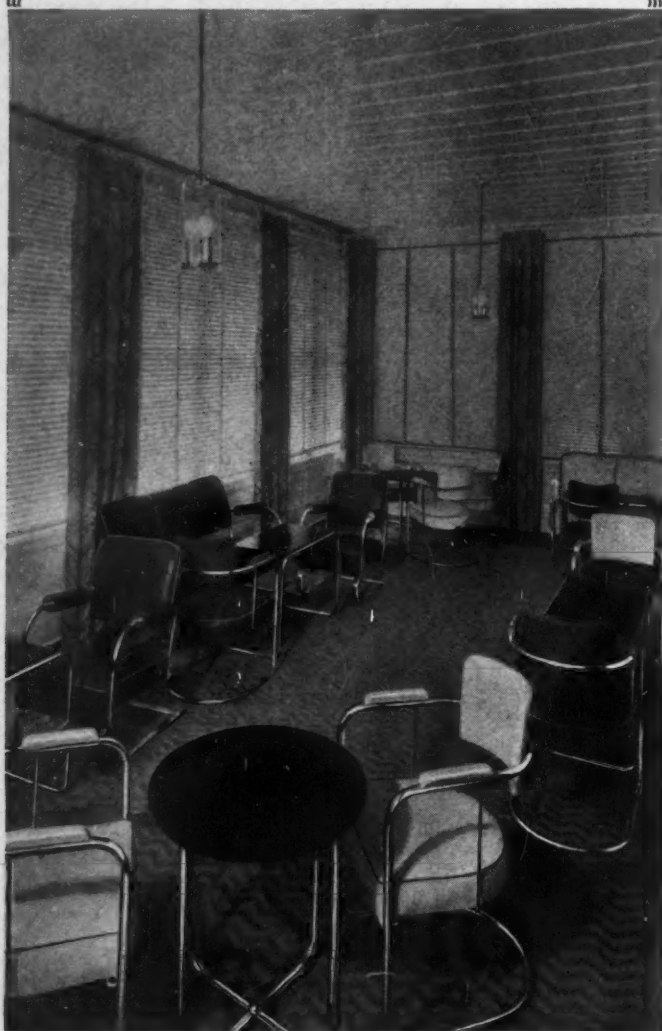
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NEW PRODUCTS...

Trail Blazing in Air Control

Air conditioning, precocious offspring of heating and ventilating, held a great deal of the limelight at the Fourth International Heating and Ventilating Exposition held in Chicago the last of January. All shapes and sizes of equipment, most of it handsome enough to be living room furniture, were on display.

Roughly, air conditioning equipment shown at the exposition seems to be divided into three types. One is the large central unit, located in the basement and operated in conjunction with the furnace, the air being carried to its destination through a system of ducts. A second type, used where centralization is not feasible, is the individual room conditioner connected with a central condenser. The third type is the completely self-contained unit with condensers, coils and fans in one cabinet, which needs only to be plugged into an ordinary electric outlet.

Ability to do year 'round duty is an outstanding feature of the modern air conditioner as shown at the exhibit. It cools, cleans, circulates, humidifies and heats the air as the season or situation requires, with a flexibility truly amazing.

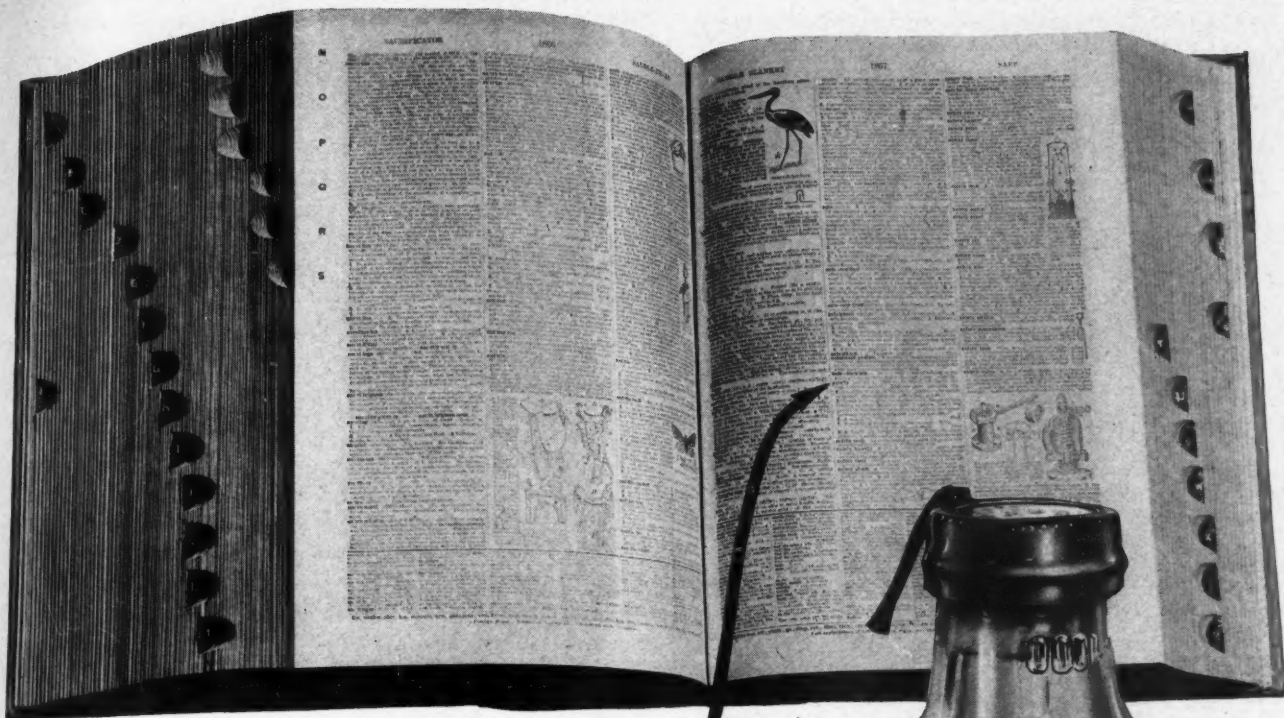
Certain exhibitors advise installing the system in two or more units to split the load so that one part of the building may be conditioned without affecting other portions.

There seems to be a distinct trend toward adapting particular installations to individual needs so that the leading companies are building up competent engineering staffs.

Many ingenious ways of making use of waste space were shown. Individual room coolers may be hung on the wall or from the ceiling or they may be set into the wall. Another variation is an overhead duct system to cool one or more rooms on upper floors with the cooling, dehumidifying and air circulating apparatus located in the attic, connected to the condenser in the basement by small copper tubes. The outlets are small unobtrusive ventilating grilles set into the wall or ceiling. The new ventilating grilles, by the way, are being made with an eye to beauty as well as efficiency. And the efficiency is being increased with such equipment as air deflection adjustments and volume controls.

The impression gathered at the exposition is that, before long, mere heating alone will be totally inadequate in both the private home and the public institution. Conditioned air seems to be the order of the day.

So much for air conditioning America—its hospitals and its habitations. We turn now to a few of the other products unveiled at this big show, and ask to be introduced first to a new system of steam heat control. For those buildings extravagantly overheated in moderate weather, there seems to be a "cure." This new graduator system utilizes two thermostats, one outside, the other inside the building. These so actuate the main steam supply valve as to proportion accurately the quantity of steam fed to the system. Result? Uniform room temperatures regardless of weather changes, and substantial saving in fuel costs. Much in evidence at the exposition, too, were air filters. With these, one defies Pittsburgh smoke or Chicago soot—such devices are becoming more and more adept at ensnaring dirt. The secret of one filter is a filtering medium of sterilized and deodorized hair—adapting nature's own method of filtering air through the nostrils. And this device is so inexpensive it



safe'ty (sāf'ē), *n.* [ME. *saufte*, *savete*, OF. *saufte*, *sau-
veté*, *salveté*, F. *sauveté*.]

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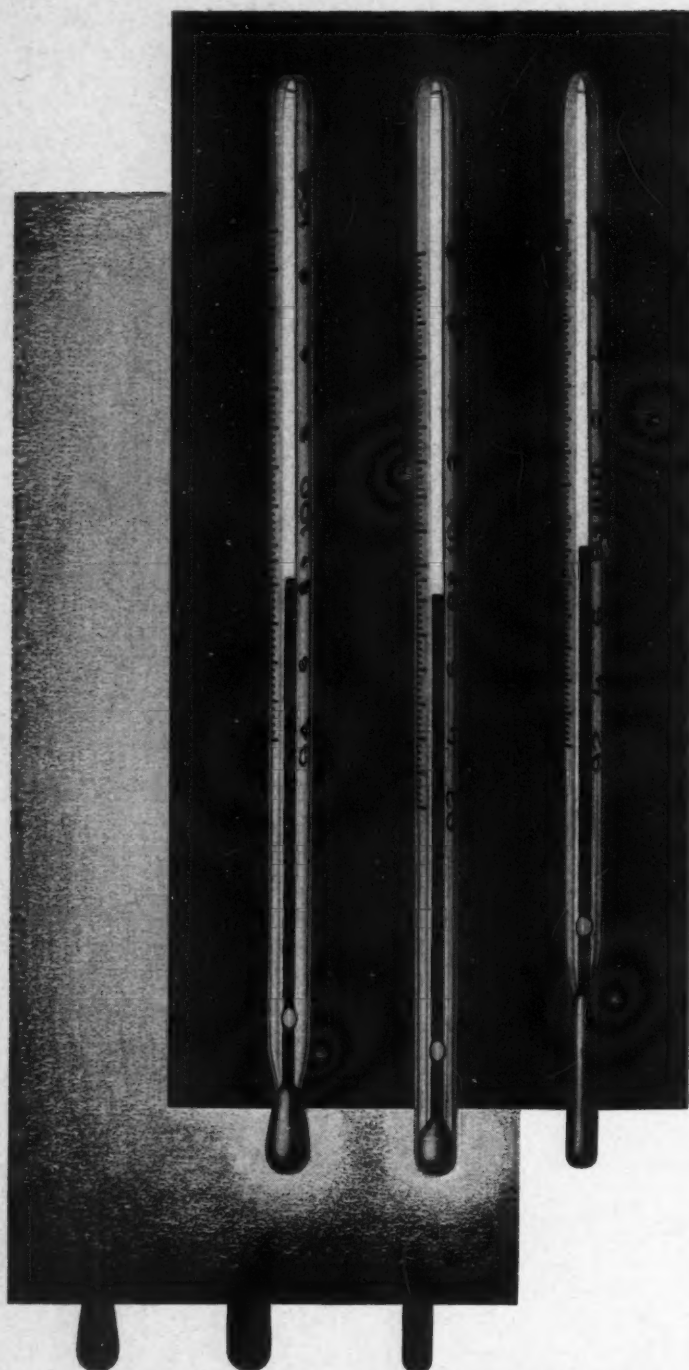
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is thrown away when dirt clogged. . . . Another low-price replacement filter also was on display. With this, dirt is trapped by an adhesive-coated mass of glass fibers graduated from coarse (broomstraw size) to fine (human hair). Pollen removing, bacteria reducing, fire resisting — such are attributes of this ingenious little servant.

And will hospital administrators interested in hay fever please note! If you would enlist electricity as aid in warring on pollen and dirt, consider the electrostatic air cleaner. In it, dust particles are so magnetized that they cling, willy-nilly, to a series of metal plates. When the latter fill up, they are easily cleaned. This mechanical servant (still in embryonic stage, we understand) boasts a low power consumption.

Also on display was a gadget that is thrice useful. It provides ventilation, exhaust and circulation as you choose. When installed in its window panel facing inward, it brings in a stream of outdoor air. Reverse it, and it becomes an exhaust fan, drawing out stale air and odors. Or removed from its panel, it functions as a portable desk fan.

Now that you have cleaned the air, you would humidify it. An inexpensive electric humidifier, easily carried from room to room as needed and said to bring comfort to tonsillectomy patients and others suffering from dry throats, was demonstrated.

Diverting your attention to conduit for underground steam lines, there's a "unit steam main" ready to install in a hurry. This lightweight system, featuring waterproof insulation, is assembled at the factory ready to install in a shallow trench of the smallest dimensions possible. Said to be low priced, this unit seems an answer to underground piping that must be done in a hurry and inexpensively.

What about insulation for boilers, for air conditioning ducts and other purposes? Well, investigate another new product introduced at the exposition. Here is a company who turns glass into a blanket of insulation — it is composed of long, flexible fibers of true glass intertwined into a soft mass resembling cotton batting in appearance, but having the permanence and chemical stability inherent in glass. Glass wool, they say, as an insulating material is well established.

Among the hundreds of interesting products on display at the exposition, we mention, finally, a day-night room thermostat, reported to be the first of its kind. The thermometer and adjustment control are concealed by a kind of door, a hinged ornamental panel so unobtrusively finished that it blends in with the color of the wall.

Design for Accounting

With an ear close to the ground as always, Physicians' Record Co., 161 West Harrison Street, Chicago, decides the time is now ripe for new hospital accounting forms. So they offer additions to their Penn-Ward System, which as you doubtless know, is a plan of hospital accounting said to be adaptable to the requirements of hospitals of all sizes. While some of the new forms are additions to the standard series, others are alternatives for forms already included in that system.

Food Mill vs. Lumps

The cook, one hears, is sometimes prejudiced against new gadgets. But try this one on him — the Foley food mill for hospitals and heavy duty. A few turns of the crank and foods are strained smoothly, retaining their flavor, it is said, and losing a minimum of pulp. It mashes, it grates, it crushes, this mill — and after purchasing it

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Blanket Colors Rival the Rainbow

Because of high prices of raw wool, Cannon Mills, Inc., 70 Worth Street, New York City, believe that 1936 will see new demands for part wool blankets. They offer a new line of 5 per cent part wool blankets featuring soft pastel colors in a wide range of shades. They have also developed the 25 per cent blanket in brilliant plaids and solid colors. A low priced blanket, the company suggests, is one solution to problems arising because of limited budgets.

News From the "X-ray Front"

These x-ray machine manufacturers are ever forging ahead. And once they achieve the heights they don't rest there, or so it seems. Producers General Electric X-Ray Corporation are a case in point. They announce this month the new Maximar, self-contained, oil-immersed 200 Kv. Therapy Unit. Safety against high voltage shock, small space requirements, simplicity of operation, minimum expense for lead lining of the room, small investment for the machine itself—these are principal improvements stressed in descriptions of this new product.

Request Numbers for Hydrotherapy

Blown in by brisk March winds is news of hydrotherapeutic equipment. That Pittsburgh firm, Standard Sanitary Mfg. Co., offers a booklet picturing such fixtures, with pages devoted to related products for hydrotherapy made by other companies such as Powers, Josam and Leonard-Rooke. Shown also are floor plans of hydrotherapeutic suites, in case you wish to particularize rather than generalize in studying this equipment. Illustrated, too, is that separate protective cover (said to be growing in popularity) for continuous flow baths. The cradle and cover allow movement in the bath, yet the patient is covered. Holes for patient's head and for attendant to insert thermometer are other features.

Crusading for Glove Comfort

This reporter-at-large next surveys the new Wilco rubber glove. It seems that Wilson Rubber Co., Canton, Ohio, has studied the glove comfort question, aiming to be rewarded by cheers from surgeons. They have fashioned a glove with curved fingers, one learns, to fit all hands in normal relaxed position and they say there is no strain when fingers are bent to grasp instruments. It is reported, too, that the redesigned construction across hand at base of thumb eliminates all binding. Strength and long life are other points advanced in favor of the new glove. The new design has also been adopted for this company's well known Wiltex glove.

PIONEERS IN MEDICINE AND SURGERY . . . No. 12



Dr. W. T. C. MORTON, a pioneering dentist, demonstrates the use of ether to a group of Massachusetts General Hospital surgeons, October 16, 1846.



Notice that though his hand is partly closed, the Miller Surgeons' Glove flexes without strain, pull or binding.



Notice the extra fullness above the knuckles where it is most needed to allow natural skin flexing.

Every Precaution Must Be Taken . . .

Although the discovery of ether is properly dated 1818, it was not until 28 years later that Dr. W. T. G. Morton, of Boston, invited a group of surgeons into the operating room atop Massachusetts General Hospital to watch the first public demonstration of the uses of ether as an anesthetic. Today, a bust of Dr. Morton occupies a niche in the Hall of Fame at New York University.

The same pioneering spirit that inspired Dr. Morton, giving him the courage to operate without first strapping his patient onto the operating table—that same spirit has guided and inspired Miller scientists through more than forty years of experimentation, culminating in the perfection of the Miller Anode Process Latex Glove.

Miller Latex Surgeons' Gloves duplicate the natural fullness found in the skin on the back of the human hand. Just as in nature, Miller Gloves allow the hand to be closed, as in holding an instrument, without fingertip tension, cramping or fatigue.

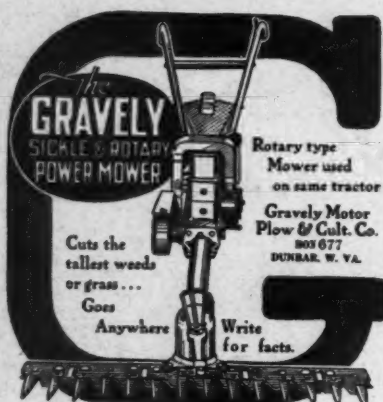
And they have yet other preferred features . . . a frosted non-slip surface insuring a firm grip upon slippery instruments, sutures and viscera . . . an unusual tensile strength of over 4,000 pounds per square inch . . . uniform thinness and elasticity that has proved extremely durable, withstanding repeated sterilizations . . . uniform weight, shape, strength and gauge . . . truly "faithful servants of the surgeons' skill."

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Over 40 years' research behind Miller Anode Surgeons' Gloves



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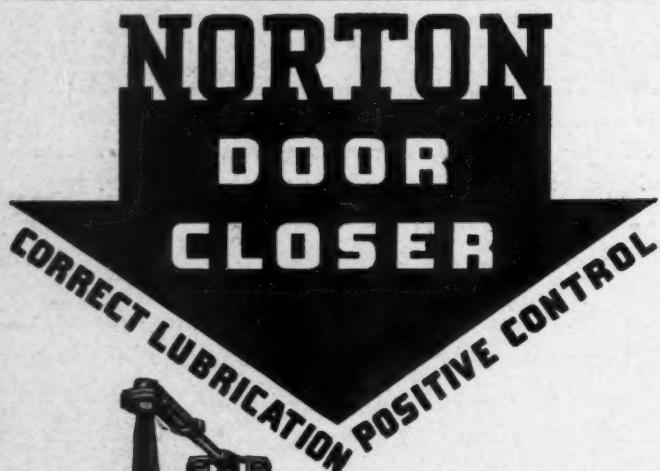
With the Gravelly Mower you cut everything. No tall weeds left standing to give that ragged effect.

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in front of the Single Wheel machine, you can mow the steepest hillsides or terraces or go into any corner. Quickly changed into a Rotary Mower pleasingly different from anything on the market. . . . Reduces your mowing costs. Does a better job. Write today for Free Booklet.

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nut which is absolutely leakproof. It permits the use of mineral oil, the proper lubricant for all working parts, assuring practically no friction and wear.

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Oxygen Therapy Reprints Available—The Linde Air Products Co., 30 East Forty-Second Street, New York City, offers a small booklet: "Oxygen Therapy—List of Available Reprints and Bibliography." Scan it and you will learn that such papers as these are yours for the asking: "A Method of Reducing the Cost of Oxygen for Therapeutic Purposes," or "Oxygen Therapy in Hospitals." You may request, too, complete medical references under any of twelve classifications in the bibliography.

A Little Volume on Sterilization—It packs a great number of things into a small bag, does the Scanlan-Morris organization. For the second edition of "Sterilization, A Handbook for Physicians, Hospital Executives and Nurses" is out. And a loaded-with-information volume it is, that slips readily into your pocket. In prefatory note, H. T. Wyatt, the author and director of research for this Madison, Wis., company, explains his objectives: to present certain essential facts about bacteria, the fundamental principles underlying sterilization, and general information which will prove serviceable in the preparation of surgical supplies. In this second edition, new material has been added describing the recent developments in sterilizing equipment and the scientific improvements in the technique of sterilization. Hospital superintendents and architects will be interested in a table presenting sterilizing equipment required for surgical departments of hospitals of various bed capacities. And neglecting no factor, apparently, of this myriad-sided subject, Scanlan-Morris in the last months issued a new Catalog "B" on "White Line" sterilizers. This sizeable book illustrates and describes their extensive line of sterilizing equipment.

Keene's Cement on Duty—Best Bros. Keene's Cement Co., 400 West Madison Street, Chicago, announces a new catalogue said to be a very comprehensive reference on Keene's cement. To build strong walls and ceilings, protected against the passage of sound, you would begin by reading such a book as this, one understands.

Furniture in Modern Mode—Two is company but three is far from being a crowd on the "Three-Passenger" davenport illustrated in the new catalogue of modern chrome-steel furniture recently issued by the Howell Furniture Co., St. Charles, Ill. Time was—and not so long ago at that—when tubular furniture was regarded as a fad if not an actual menace to the unwary person who tried to sit on it. Now such items, to which the Howell Co. points with pride, are noted for their comfort and beauty. The tubular framework and inner-spring filled upholstery are a far cry from the slippery horse-hair horrors in use in grandmother's day.

Buying for the Office?—Then you're off to a happy start with such a volume as the "Buyer's Guide for the Office," sturdy 480-page brain child of Shaw-Walker Co., Muskegon, Mich. But to back up some years, to the month of March, 1899: two boldly venturing young men—the one, Shaw, the other, Walker—set up business in two vacant stores on a side street frontage in Muskegon town, with a capital of less than \$500 and some of that borrowed! Now, when you study their catalogue you figuratively walk through a store displaying more than 8,000 items—office furniture, record-protective equipment, supplies in general. If you are in a hurry, turn to a page of the index listing specific products for use in hospitals and clinics.

Savory Over a Century—A fat, jolly chef smiling ingratiatingly on the cover of the new catalog issued by Savory, Inc., Newark, N. J., introduces the Savory-Puritan line of cooking utensils and kitchen equipment.